1

3

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					David Dunlap Observatory						
					74" Logbook						
			X		Vol 55						
					Plate Nos 45196-46095						
					Nov 1980 - Aug 1981						

5

Date Nov. 5-6/20 Wed-Thurs Observers Ase-Ty

5m68 Emulsion Batches: 098-02E 07119-23100
IIaO-e

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45196	HD 186 791	19 47.5	+10 22	17 38	17 47	0 44W	+10 40	Ne/— Fe/ND	8-8
45197	HD 159181	17 28.2	+52 23	18 09	18 11	3 24 W		"	8-8
45198	HD 209867	21 26.3	-6 01	18 23	18 29	0 16E		"	8-8
45199	HD209750	22 00.6	-0° 48'	18h 43	18h 48	0 30E	Approx	"	8-8
45200	HD 8890	01 22.6	+88 46	18 53	18 57	3 00EX		"	8-8
45201	HD 203156	21 19.4	+37 49	19 05	20 09	1 32 W	+38 12	"	8-5 5
45201T	Spot Calc for 45196-45204			15min @	15V D3 7V D1 7V D2 4810 HL 5450				
45201F	Focus Test					0 hr		Fe/—	8-8
45202	HD224014	23h 49.4	+56° 57	22 16	22 58	1 47W	+57 30	Fe/ND Ne/—	8-8 8-8
45203	HD31 964	4h 54.8	+43 41'	23:25	23:31	2 44E	+43 48	Fe/ND Ne/—	8-8 8-8
45204	HD 7327	1h 13.8	+57° 42	23:36	23 59	1 24 W	+58 05	"	8-8 8-8
45204F	Focus Test					0 16E	1	Fe/—	12-12
				02 13				Fe/ND	12-

Spectr.
Focus.
Spectr.

Spectr. Temp. +43°F Dome Temp./Hum. +35°F / 70% Transparency Conditions ... Cloudy mainly ... 6

Focus ... 503-507

Spectr. Temp. +38°F Dome Temp./Hum. +31°F / 92%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/23	3"	4.15	K3II	BC	1200/.7	*150μ	098 02E	A	St Vel	*"V" Rotten	fine
40/22	"	2.87				"		B	Arc Reg		uneven guiding
40/22	"					"		A	"		fine
40/22	2"					"		B	Arc Reg		fine
40/23	"	2.5	F8Ib			"		A	"		v sl strong uneven
400/178	"	5.75	F2			"		B	"	Clouds!	v sl weak
							"			T	
				BC	1200/.7	15/1.0	098	B		T=40°F Set 503	Con t blue
200/128	2"	4.4	F8Iap	"	1200/.7	150/.5	098 02E	B	Arc Reg	cloud	Fine
40/22	2"	2.99	A8Ia	"	"	"	"	A	"		Fine gray Arc
200/135	2"	4.95	F0Ia	"	"	"	"	B	"	T=38°F more cloud	Fine gray
				"	830/.68	BS	098	A		T=38° Set 507	v sl red

7 Fri/Sat

Date Nov. 7/8, 1980 Observers Gis-Tn

Emulsion Batches:
IIaO-E 13050 - 01110
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45205	HD 43112	$6^h 09.^m6$	+13° 53'	5:32	6:25	$3^h 06^m$ W	+13° 52'	Fe/ND	12-12
45205T	Spot Cal'n for	45205			15 min @ 15V	D4 3900	D3 4300	D2 4910	

Spectr.
Focus
Spectr.
Exp. Min
400/2

Spectr. Temp. +45°F ..... Dome Temp./Hum. +33°F / 96% Transparency Conditions ... Good after rainfall. 8
Intermittent cloud.

Focus ... 505 .....

Spectr. Temp. +43°F ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/272	4"	5.67	B1II	BC	830/.68	BS	IIaO·E	A	Runaway *	cloud - no 3rd Fe arc.	Fine - effect like bad guy or dirt
							IIaO-E				

9 Salt Run

Date Nov 8/9 1940 Observers BAK-TN

Emulsion Batches: IIaO-E 13050 24100

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45206	HD 186791	19 41.5	+10 22	17 33	17 39	0 50 W		Fe/ND	16-16
45207	HD186791	19 46.2	+10 10	17 42	18 04	1 10 W	10 25		16-16
45207T	Spot Calc for 45206			15 min @ 15V		D4 3900	D3 4300	D2 4810	
45208	HD 187013	19 42.6	+33 30	18 08	18 33	1 44 W	33 45	Fe/ND	16-16
45208F	Focus Test					0	0	Fe/—	16/6

Spectr. Temp. +42°F Dome Temp./Hum. +35°F/70% Transparency Conditions ... cloudy ... 1/2

Focus ... 506 ...

Spectr. Temp. ... 41°F ... Dome Temp./Hum. +31°F/80%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/22	3"	4.15	K3II	RC	830/1.68	150/5	IIaO-e	A	std vel		Fine Fe wk
400/180	3"-4"	5.6	F8	"	"	"	"	B	Wat Prog		Fine Fe wk
							"				
400/165	3"	5.5	F5V	RC	830/1.68	150/5	"	A	wat prog	cloud	Fine Fe wk
						150/10	"	B			cont s/ Rel
										* Fe's just not given enough time should be 13-13-13	

11 Check Fe centering on dirty window (last night for wavelength but probably not given enough time any longer)

Date Wed Nov 12-13 1980 Observers Arc-Ri-

Emulsion Batches: 5m 68' 09820207119 05110

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45209	HD 159181	17 29.2	52° 23'	17h 48m	17h 53	3:35 W		M/— Fe/ND	5
45209F	focus test							Fe/—	8-8
45210	HD 204867	21 26.2	-6° 1'	18h 09m	18h 11m	0 12 W	-5° 33'	1	5-8
45211	HD 217476	22h 55.6	56° 25	18h 21m	19h 05m	0 40 E	56° 59	1	5 1-5 5 2
~~45212~~	~~HD 224014~~	~~23h 49.4~~	~~56° 57~~	~~19h 15m~~					5 5
9521171	optical to plate	45209-N		15 min @		150 D3 4810	70 D1 Hα	70 D2 5460	

Spectr. Temp. 38°F Dome Temp./Hum. +01°C 82% Transparency Conditions 12

Focus 505

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
90/22		V 2.87		BC	1200/.7	150*	098-02E	B	Arc Prog.	* "V" filter	v sl str
				B.C.	1200/A	150/1.0	098-02E	A		BROKEN ½" missing	
40/20		2.87		〃	〃	〃	〃	A	〃		fine
400/250		4.99	GOLa	〃	〃	〃	〃	B	〃		fine
400/		4.4	FBlap	〃	〃	〃	098-02	A	〃	dotted in	
							098-02				

13 (Nov 14-15)

Date ~~Sat. Nov 15~~ 1958. Observers C.W.-R.

Emulsion Batches: Tech-5 13050-01 N.O.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
4521R	O CET	$2^h 14^m.3$	$-3°26'$	00:47	01:01	02h 04W	-02°58	Fe/ND	12:2:2
45213	U ORI	5h 49 9	+20°09'	01.16	03:06	00h 32W	+19°50	Fe/ND	12-14-14
45213T ✓	spectral tube plate	45212-14			15m @ 150 Ma	D4 3900	D3 4300	D2 4810	
45214	HD 44131	6h 15.0	-02°54	03:12	03:50	00h 53W	-02°55'	Fe/ND	14-14-14
45214F	focus test							Fe/-	14-14

Spectr. Temp. 90°F Dome Temp./Hum. 0°C 82% Transparency Conditions 1/4

Focus 506

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
900/900	3"-4"	53	M5.5e - M2e	B.C.	830/.68	150/.3	IIaO-E	A	Crw MIRAS		fme
500/700		7.8	Me	B.C	830/.68	150/.3	IIaO-E	B	"		sl weak
							IIaO-E				
200/182		649	sM1	B.C.	830/.68	150/3	IIaO-E	A	8v 2nd	clouded in 370F 507	good
				B.C	830/.68	150/10	IIaO-E	B		" "	

15

Date Sat Nov 15 - 1980 Observers ... Wh./R.I./B.A.-R.

Sun Nov 16

5" 5" Emulsion Batches: ~~Tri-X~~ IIa-E 8477

5" ~~Tri-X~~ 1305D - 0111D.

5" 098-DF 0719 - 1211D.

5" ~~Tri-X~~ IIa-E 0719 - 0111D.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45215F	Focus	—	—					Fe/ND	2/2
45215	SW Cyg Comp #1 (Evans Prog)	$19^h40^m.8$	29° 01'	18^h15^m	18:45	02^h25W		Fe/ND	1-1
45216	"	"	"	18^h45^m	19^h36^m	3^h15^mW		Fe/ND	1-1
45217F	Focus	—	—	—	—			Ne/ND	20/20
45217	HD 214419 = 69 Cyg	$22^h32.9$	+56°23'	20^h04^m	20^h57^m	1^h45^mW	56° 50'	Ne/ND	5-5
45218	"	"	"	21^h00^m	21^h48^m	2^h35^mW	"	Ne/ND	5-5
45219F	Focus	—	—	—	—	—	—	Ne/ND	20/20
45219	HD 211853	$22^h15^m.0$	55° 37'	22^h00^m	23^h00^m	4^h05W	55° 05'	Ne/ND	5-5
45219T	spotted to plates	45215 - 45220			15min@70	D2 5450	D2 5450	D2 5450	
45220	HD 211853	$22^h15^m.0$	55° 37'	23^h02^m	23^h55^m	5^h00W	+55° 05'	Ne/ND	5-5
45221	HD 5394	00 50.7	+60° 11'	00:13	00 17	03"46W	+60°40	Fe/ND Ne/—	8-8
45222	HD 5394	00 50.7	+60° 11'	00:20	00:26	02 56W	+60° 40	Fe/—	15-15
45223	HD 33308	05 044	-08°53	00:37	00.52	00"52E	-08°42	Fe/—	7-10-12
45224	HD 41335	05 59.3	-6° 42	00:56	01:38	01 01 E	-06 39'	Fe/—	10-10-10
45224T	spotted to plates	45222 —			15min@	17.5U D4 3900	15U D4 4300	15U D4 +810	

Spectr. Temp. ..... Dome Temp./Hum. 0°C ... 82% Transparency Conditions .. Photometric ..... 1.6.

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
—	-	-	-	BC+IT	150/~~.55~~ .65	150/.6	IIaD-E	1	5 am.	"V" filt. in	
800/10		est. ~11	?	BC+IT	" .55	"	"	2	"	"V" filt. out integrate 50/03	poor focus
800/20		"		"	"	"	"	3	"	"	
	~3"			"	1200/.55	"	"	1	wh. WR.	Hz.	
800/40		8.94	WN7+07	"	"	"	"	2	"	"V" filter in integrate 30/02	ok
800/40		"	"	"	1200/.71	"	"	3	"		ok
							"	1	wh. WR	V filt.	
800/37	"	9.02	WN6 +BOI	"	1200/.55	150/.5	"	2	"		ok, fuzzy
							"		"		
800/33		9.02	WN6 +BOI	BC+IT	1200/.710	150/.5	IIaD-E	3	wh-WR		"
90/111		2.43	BOe	B.C	1200/.7	150/1.0	[illegible]	A	Be-Bln	33°F 506	sl str uneven
40/122	5	2.13	BOe	B.C.	1200/.025	BS	IIIaJ-E	B	Be-Bln		v sl weak pressure marks
40/90		4.07	B3Ve	"	"	"	IIIaJ-E	A		32°F 509	good
40/110		5.16	B2e	"	"	"	"	B	Be-Bln		good
							IIIaJ-E				

17 PS #2

Date Sun. Nov 16 1980 Observers ...B.L.-R.....

Emulsion Batches:

8" Tech-E. 13050-01110

5" 098-02E. 07119-12110

5" Tech-E. 07119-01110

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45225	HD 25639	03h 59.0m	+62° 03'	01:49	02:47	02°05W		Fa/HD	12 2-1
45225T	spot and fu plate	45221			15min @	150 45 10	D3 7	01 IIa	7002 5950
45226	HD 25638	03 59 0	+62° 38'	02:48	03:41	02 59 W	+62° 17'	Fa/AO	12-2
45227	HD 25639	03 59 0	+62° 03'	03:42	04:34	03 53W	+62°17	Fa/HD	12-12
45227T	spot and fu plate	45225-27			15min @	150 volts	D4 3900	D3 4300	
45228	HD 37468	05h 33.7m	-2° 39'	04 41	04:50	02m37W	-2°33'	Fa/-	15 15
45229	HD 41335	05h 59m.3	-6° 42'	04 57	06:02	03 25W	-06°50	Fa/HD IIa/-	6-6-6
45229F	focus Tech			6				Fa/-	10-10
45230	HD 92588	10 36.4	-01° 13	06:14	06:40	00:35E	-01035	Fa/AO	12-12
45230F	Focus Tech							Fa/-	16-16

Spectr. Temp. ..... Dome Temp./Hum. -06C ... 83% Transparency Conditions ..... 18.

Focus .....

Spectr. Temp. ..28°F..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/300	3-4	7.15	B0V	BC	830/.68	BS	IIa-0E	A	SB-Bln	SZ Cam (lower left ...)	fine
							098-02-E				
400/300		7.1	B0V	BC	830/.68	BS	IIaO-E	B	SB-Bln		fine
400/300	3-4	7.15	B0V	BC	830/.68	BS	IIaO-E	A	SB-Bln	30°F 509	fine
							IIaO-E				
40/90	3	3.51	09.5V	BC	1200/-.1075	B.S.	IIIaJ-E	B	SB-Bln	29°F 506	sl weak
90/100	4	5.16	B2e	BC	1200/.7	150/.7	098-02E	A	Be-Bln		fine
				B.C	1200/.7	150/.7	098-02E	B		28°F 506	v sl blue
200/112	3	6.4	4IV	B.C	830/.68	BS	IIaO-E	A	Std Vel	28°F 510	exp. fine
				BC	830/.68	BS	IIaO-E	B		28°F 510	v sl red

17 19

1980

Date Sun/Mon Nov 16/17 Observers Rm-Li // Hk-Ri

Emulsion Batches:

8" 68° Tech-Ex 13050

4" 65° IIaD 5/80

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter
45231F	Focus test							Fe/-
45231	HD195295=41Cyg	20h 35.3	+30° 2	17:22	17:30	00 15W	+30° 20	Fe/ND
45232	HD196661=5UCyg	19h 40.6	+29° 01	17:34	18:56	2h 40W	+29° 14	Fe/ND
45233T	spot cable-for plate 45234	-		15 min @ 15V		D4 3900	D3 4300	D2 4800
45233	HD171635=45Dra	18h 30.9	+52° 58	19:01	19:15	1h 10 W	+57 02	Fe/ND
45234	HD204867=βEqr	21h 06.3	-6° 1'	19:21	19:27	1h 25W	-5° 40	Fe/
45235	HD207750=νPeg	22h 04	-0° 48	19:31	19:37	1h 00 W	-0° 35	Fe/ND
45236	HD199089=ηCyg	20h 18.6	+37° 56	19:48	19:50	2h 57W	+41 12	Fe/ND
45237	HD197581=χCyg	20h 37.5	+35° 13.6	19:55	21:12	3h 57W	+35° 32	Fe/ND
45238	HD203156=HR8177	21h 16.9	+37° 49	21:15	21:37	3h 46	+37° 11	Fe/ND
45239	HD3712=χCas	00 34.8	+55 59	21:40	21:42	00h 30W	+54° 27	Fe/ND
45240	HD30702=κPer	3h 17.2	+44° 30	21:49	21:51	00h 05E	+44 45	Fe/ND
45241	HD17058	2h 47.0	+40° 35	22:02	23:45	00h 20W	+40 55	Fe/ND
45242	TD203315	3h 11.0	+43 39	23 53	23:58	00 10W	+44 57	Fe/ND
45243	GH Pers	3h 24 4	+43° 33.7	00:46	01:16			-

pectr. Temp. 37° Dome Temp./Hum. -02°C 83% Transparency Conditions 2D

ocus .....

pectr. Temp. ..... Dome Temp./Hum. .....

xp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	IIaE	A		Focus 309	v sl red
70/70		4.43	F5II	BC	830/.68	BS	IIaOE	B	Cepheid/Evans		strong
100/100	2"	6.9-7.7	F8-G1	BC	830/.68	BS	IIaOE	A	Cepheid/Evans	called "33"	v sl str
40/70		5.5	F7Ib	BC	830/.68	BS	IIaOE	B	Cepheid/Evans	called 33A	sl str
80/80		3.73	G2II6	BC	830/.68	BS	IIaOE	A	Cepheid/Evans		sl str
10/82		3.91	G2Ib	BC	830/.68	BS	IIaOE	B	Cepheid/Evans	broken 2 pieces	sl str
20/41		3	F8Ib	BC	830/.68	BS	IIaOE	A	Cepheid/Evans		strong
100/100		6.6-8.4	F8-G2Ib	BC	830/.68	BS	IIaOE	B	Cepheid/Evans	spectrograph 32°F	fine
30/40		5.1	F2	BC	830/.68	BS	IIaOE	A	Cepheid/Evans		sl str
10/20		2.1	K0III	BC	830/.68	BS	IIaOE	B	old red		sl str
20/35		2.3	K2III	BC	830/.68	BS	IIaOE	A	Cepheid/Evans		strong
50/55%		9.8	A7Ia	BC	830/.68	BS	IIaOE	B	SUCoMaE/Tur Evans		exp good sl. flex?
40/30		5.1	B8II	BC	830/.68	BS	IIaOE	A	HR std Evans	T 310F	
—				R.C.-IT	1200/.550	LPR	IIaD	IT			only some stars

21 Pg #2

Date Nov. 17. 1950 Observers H-R

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
		1950	1950						
45244	NGC 2392	07 28.0	+20° 57	01.32	02:32	01"56E	+21°02	—	—
45245	"	"	"	02:08	02:30		"	—	—
45246	"	"	"	02:44	03:14	00"45E	"		
45247	"	"	"	03:19	03:29	00.20E			
45248	"	"	"	03:50	04:10	00:05W			
45249	HD 66751	07 59.9	+70° 001	04.36	05:15	0035W	+69°47	T/no	1/6
45250	HD 76151	08 49.4	-05° 04	05:22	05:45			T/no	1/32
AS25UF	focus test							Fe/—	12-2

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 22

Focus ..... 507 .....

Spectr. Temp. ..... Dome Temp./Hum. -05°C 85% .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
—		10		R.C.-IT	1200/.550	LPR	IIaD	IT			sl str
"		"		"	"	"	"	"			v sl str
"		"		"	"	"	"	"		tele reversed	sl str
				"	"	"	IIaD	"		"	v sl str
				B.C. IT	1200/1.000	"	"	"		" discarded	nothing!
400/300		7.0	dF8	B.C.	1200/-.025	BS.	IIa-E	A		T 30°F 507	v sl weak
400/92		6.67	dG3	B.C.	1200/-025	BS.	IIa-E	B		dark	weak
				"	"	"	"	B		29°F 507	v sl red

23

Wed 10 = 2
098 12 = 3

Emulsion Batches:
8m 68° IIaD 13050 - 16110
.....
.....

Date Wed/Thu Nov 19/20 1980 Observers Inr - In

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45251	HD 16893	02h 37m.4	+67° 23'	22 35	00 51	1 47 W	+67° 51'.2	Fe/ND	12-12-12
45251T	Spot Calib	for 45251	-		15 min @ 15V	D4 3900	D3 4300	D3 ND 1.0	
45252	HD 27808	4 18.3	+21 30	01 02	02 42	1 59 W	+21 47.9	Fe/ND	16-16-16
45253	HD 27383	4 14.2	+16 18	02 49	03 49	3 11 W	+16 35.2	Fe/ND	12-12-12
45254	HD 28911	4 28.2	+13 02	03 54	04 39	3 46 W	+13 20.0	Fe/ND	12-12-
45254F	Focus							Fe/-	4-C

Spectr. Temp. +36°F ..... Dome Temp./Hum. 32°/90% Transparency Conditions Hazy - Cloudy 24

Focus 508 .....

Spectr. Temp. 34°F ..... Dome Temp./Hum. ...../100% 37

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
800/600	2"	8.92	A3	BC	830/.68	BS	IIaO-E	A	Tnr/Rm SU Cas/Assoc.		stuck
							"				
400/600	1-2"	7.66	F7 V	BC	1200/.025	BS	IIaO-E	B	Tnr/Hyades Std	T=35° Set 506	Fine
200/160	1"	7.44	F8 V	BC	830/.68	BS	IIaO-E	A	Tnr/Hyades Bin	T=35 Set 508	"
200/113	2"	7.05	F5 V	BC	830/.68	BS	IIaO-E	B	Tnr/Hyad. Bin	Clouds, fog.	v stuck
				"	"	"	IIaO	B			

25 Rg Tour ≈ 0.5 hrs Observing
Thurs - Fri

Date ..Nov. 20-21, 80... Observers ...T.n.....

Emulsion Batches:
8m G8 IIaO-E 13050 - 16110 20217
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45255	HD 200120	20 56.4	+47 08	20 34	21 03	3 45W		Fe+0	13-26
45255T	Spot Calib for 45255			15 min @ 15V		D4 3900 D3 4300	D3 4810		

Spectr. Temp. +40°F ..... Dome Temp./Hum. ...../.902. Transparency Conditions ... A mess 26

Focus ....506.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/94	1"	4.51	B2o	BC	830/1.68	BS	IIaO e	A	Be Bkg	cloud	VG1 wk
							IIaO-e		1 1/2 s + 4 x 5		

27 Pg #1
SAT-Sun

Date Nov. 22/23. 1980. Observers Wh./T.n.

Emulsion Batches:
IIa0-e 13050 -20 110
098 mE -
IIaD-e -

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45256F	Focus	—	—			0	0	Fe/—	12 sec
45256	HD222566	23 34.8	+5° 05	17h 31m	17h 34m	2 13 E	+5° 3m	Fe/ND	15-0
45257	V1016 Cyg.	19 53.6	+39 34	17h 47m	19h 07m	3h 03m W	+39 47	Fe/ND	8-6-8
45258	" "	"	"	19h 13m	20h 36	4h 30 W	+39°47'	Fe/ND Ne/—	8- 6-
45258T	1 Spot Calib for 45256	-57,65			15min @ 15V	D4 3900	D3 4300	D2 4810	
45258T2	" " for 45258				15min @ 15V D3 4810	7V D1 H—	7V D2 5450		
45259F	Focus	—	—					Fe/—	6-6
45260	HD3712	0h 34.8m	65° 59m	21h 35	21h 35	48 W		Fe/—	3
45261	"	"		21h 36	21h 38m	049 W		Fe/—	3
45262	"	"	"	21h 39	21h 41m	0 51 W		Fe/—	3
45263F	Focus	—	—						
45263	HD108	0h 0.9	+63° 7'	22h 40m	23h 12m	2h 56 W	63° 37'	Fe/ND	2-2-2
45264F	Focus	—	—					Fe/—	2-2
45264	HD263490	4h 5.4	+16°23'	23h 35m	0h 25m	0 6m E	+16° 36'	Fe/ND	2-2-2
45265	HD36576	5 27.7	+18 28	01 06	01 18	0 22 E	+18 33	Fe/ND	13-13-13

Spectr. Temp. 42°F Dome Temp./Hum 39F/72% Transparency Conditions Clear at start 28
Focus 506 high cirrus ~ 20° 00
Spectr. Temp. ____ Dome Temp./Hum. /

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	200μ* +1	IIaO	A		* 2 slits ?? No T=42°F Foc 506	Blue obj red is red
40/17	~5in6"	4.6	F7 II	"	"	250/.5	II-O-e	B	std vel	2nd comp mis fixed not put on	fine
800/90	3	10.4	[e]	"	"	250/.5	"	A			emission only
800/60	"	"	"	"	1200/.7	250/.5	098 on E	B		Staggered early - cloud T=42°F Foc 504	Hel str others wk
							II-O-e				
							098 on E				
				IT	150/.500	BS	IIaD	1	—	47a Filter Parallel	
40/1		2.5	K0 III	"	"	"	"	2	Std Vel	" Wire	wk
40/2		"	"	"	"	"	"	3	and I.T. time	" Comp str	good
40/4		"		"		"	"	4		"	strong
				"	150/.550	"	"	1	—		
800/40		7.4	Of pec	"	"	"	"	2	Wide Prog.		
							"	1			
40/20		7.	B		150/.550	BJ	"	2	Wide		
320/320	2"	5.71	B2 III	EC	830/.68	BS	II-O-e	B	Survey	Cloud	v sl str
										Close	

29 pg #2
Cont

Date ..Nov. 22-23..... Observers ..Jn.-Are,/.Nr.-Tu...

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45266	HD 37657	05 35.1	+43 00	01 23	4 26	2 35 W	+	Fe/ND	13+3-13
45267	HD 25539	03 59.1	+62 04	4 35	5 40	5 26 W	+	"	13-13

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 30

Focus .....

Spectr. Temp. .1.40F..... Dome Temp./Hum. +35 / 95%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/272	1-2"	7.22	B3 line	BC	8301.68	BS	IIa0-e	A	Runaway	cloudy	good
40/138	2"	715	BOV	"	"	"	"	B	SB Nr	cloud cy qcks	v sl weak sl flex?

31 Tues. Wed

Date Nov. 25.26. 1980 Observers Ace-Tm

DIP 5m 65

Emulsion Batches:
098 & E 07119 -12110
099-02 E 07119 -24110

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45268F	Focus Test							Fe/—	12-15
45268	HD 185791	19h 41.5	+10 22	17h 18	17 22	1h 39 W		Fe/— Fe/IIa	9-9
45269	HD 64 136	17h 59.7	+30° 12'	17h 31m	17.49	3h 53 W	+30° 17	Fe/—	5-5-5 5 5 5
45270	HD 180583	19 12.0	+27 45	18h 04m	20 48	5h 28 W	+	"	5.5-5 5 5-5
45270T	Spot Calib	for 45268-78			15 min @	15U D3 4810	4U D1 Hα	4U D2	
15-71	HD 203156	21h 15.4	+37° 19	20h 52	22 03	4 48W	38° 14	Fe/IIO	5-5 5
45272	HD 217476	22h 53.9	+56° 50	22h 08	22 30	3 35W	+56° 57		5-5-5 5 5 5
45273	HD 224014	23h 49.4	+56° 37	22h 35	22 55	3h 05 W	+57° 29	"	5-5-5
45274	HD 7927	1h 13.8	+57° 42	22h 59	23 34	2h 20 W	+58 01	"	5-5-5
45275	HD 18391	2 52.2	+57 16	23h 41	00 53	2h 00 W	+57 38	"	5-5-5
45276	HD 14662	2h 18.9	+59° 55'	00h 58	2h 29	4h 10 W	+59 11	"	5-5-5
45277	HD 31964	4 54.8	+43 41	2h 35	2 42	1 45 W	+43 50	"	8-8 8 8
45278	HD 3890	1h 22.6	+88 [illegible]	3h 56	4 00	5h 57 W	+89° 06	"	8-8
45278T	Spot Calib	for 45278-79		15m @	15U D3 4810	5U D1 Hα	4U D2		
45279	HD 41335	5h 59.3	-6° 42'	4h 26	5 23	3 25 W	-6° 37	"	5-5-5 5-5-5

Spectr. Temp. +36°F ..... Dome Temp./Hum. +30°F/75% ..... Transparency Conditions ..... Fine .....

Focus ..... 506 .....

Spectr. Temp. +27°F ..... Dome Temp./Hum. +21°F/94% .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	3½			BC	1200/.7	*150μ	098-02	A		*"V" filter	
	3"			BC	1200/.7	"	098-02E	B	Std Vel		slightly Fine
40/22	3"	4.48	F2II	BC	1200/.7	*150μ	098-02E	A	Arc Prog	*"V" filter	Fine
80/93	3"8"	5.73	F6-116	"	"	"	"	B	"	"	wk?
							"				
400/250	3-9"	5.75	F2	"	"	"	"	A	Arc Pray	T: 23°F	Fine
400/233	"	9.99	F7Ia	"	"	"		B	"		Fine
200/131	"	9.9	F9Ia	"	"	"		A	"	T: 12°F 567	Fine
20/129	"	9.95	F0Ia	"	"	"		B	"		Fine
400/200	3"	7.46	K5	"	"	"	"	A	"	removed slit because of suspicion of filter posn.	"
400/250	"	5.9	F7Ib	"	"	"		B	"		Fine
40/22	3"	2.99	A8Ia	"	"	"	"	A	"		Fine
40/20	"	2.5	F8Ib	"	"	"	098-02E	A	"		slightly Fine
							"				
400/272	"	5.16	IV2a	"	"	"	"	B	Be-Bln	cloud	very F

33

Wed Thurs

Date Nov. 26-27 19[illegible] Observers Rm-Tk / Nr-Tn

Emulsion Batches:
8"68 IIaO-e 13050 - 20110

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45280F	Focus Test							F/-	12-12
45280	HD196791	19h 41.5	+40° 02	17 22	17 23	1 44W	+10° 40	Fe/ND	12-12
45281	HD196886 SVCyg	19h 40.6	+29° 01	17 26	18 49	3 12W	+29 22	"	13 13-13
45281F	Spot Calib Sv	45280	15m @ 15v		D4 3900	D3 4300	D2 4810		
45282	HR7306=HD187583	19h 12.0	+37° 45	18 52	19 20	04 11W	+38° 30	Fe/ND	12-12
45283	HERNST=HD206156	21h 05.4	+37° 49	19 26	19 44	02 32W	38° 17	Fe/ND	13-13-13
45284	HD168973	2h 37.4	+67° 03	19 51	22 08	00 32E	+67° 50	Fe/ND	13-13-13
45285	HD 17856	2h 9[illegible]	+63 35	22 13	00 18	01 27W	+69° 06	Fe/ND	12-13
45286	HD25639	3h 59.1	+62° 04'	00 27	01 04	21' W		"	13-13-13
45287	HD25638	3 59.1	+62° 04'	01 05	01 57	W		"	13-13-13
45288	HD25639	"	"	01 53	02 37	2 38W		"	13-13-13
45289	HD58021	10h 03m.6	+20° 49'	02 46	03 26	2 38E		"	13-13-13
45290	HD63887	07h 46.1	+71° 57'	03 46	04 45	0 55W		"	13-13-13

Spectr. Temp. 35°F ..... Dome Temp./Hum. 733°F / 73% ..... Transparency Conditions .... hazy 34

Focus ... 508 .....

Spectr. Temp. .33 ..... Dome Temp./Hum. 724 / 98%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	B5	IIaJE	B		Focus 508	con slR
40/32	1"	4.1	K3"	BC	830/.68	B5	IIaJE	A	std vel		sl str
200/352	1"	6.7-7.7	K3"	BC	830/.68	B5	IIaJE	B	Capt/Evans		v str
100/176	1"	6.7	F2	"	"	"	"	A	Capt/Evans	T = 35°F	str/sl str
70/141	1"	5.9	F2	"	"	"	"	B	Capt/Evans	adj FO	sl str
200/320		8.9	A3 III	"	"	"	"	A	SUCas A Tr Evans		fine
200/406	2"	7.0	A2 I	"	"	"	"	B	SUCas Aasc Tr Evans	T = 35°F	sl str
100/135	2"	7.15	BOV	"	"	"	"	A	SB-NT	ghost Left in slit eyepiece ie SE objt.	v sl str
100/135	"	7.7	BC	"	"	"	"	B	"	upper right in slit eyepiece	borderline fine
100/135	"	7.15	BOV	"	"	"	"	A	"		fine
100/170	"	7.2	9GS +A2	"	"	"	"	B			sl str
100/183	"	7.5	A0	"	"	"	"	A			fine
	Dev HaO a		3m	DA	6"	Bl		Dev 27 to			

3 35

Date Sat-Sun Nov. 29-30. 1980 Observers ... Ri .....

Emulsion Batches:
Tri-X-E 20 206
a98-E.0711.9-01.U.D. ... 13 233
a98-E.0711.9-2511D ....

5m 68°

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
45291F	focus test			[illegible]				Fe/-	18
45291	HD 201910	21 07 5	+40°47	18:17	19:33	22h42m W	+41° 09	Fe/ND	13-15
45291T ✓	optical to plate 45291-				15m @ 150 volts	D4 3900	D3 4300	D2 4510	
45292	HD 200120	21h 56.4	+47° 26'	19:44	20.22	3h 41 W	+47° 30	Fe/-	3-4
45293	HD 201120	21h 56.4	+47° 26'	20:28	21:19	4h 40m W +40		Fe/ND 1.0 f/-	6-6 6-6
45293T	optical to plate	45293			15m @	150 D3 48.0	70 D1 Hd	70 D2 5450	
45293T2 ✓	" " "	45292			15m @	17.50 D4 3900	150 D4 4300	150 D4 4300	

Spectr. Temp. ..... Dome Temp./Hum. 0°C 89% Transparency Conditions some cirrus clouds 36

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Bc	830/.680	B.S.	IIIa-E	A		37°F 507	
400/300		7.27	B	BC	830/.680	B.S.	IIIa-E	B	RUNAWAY*		Fine
							IIIa-E				
45/120		4.51	Ble	BC	1200/.025	B.S.	IIIa-E	A	Be-Bln	36°F 505	V T
40/100		4.51	Ble		120/.700	100/.7	098-e	B	Be-Bln	UV/red overlap should use 0G13 filter	
							098-02E				
							IIIa J-E				

*

37

Sun Mon

Date ..Nov 30 - Dec 1... Observers ...Wh / T.n.....

Emulsion Batches:

5m 68° ..IIa D-e.....

8m 68° .IIa O-e..13050-20110 19 2

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
45294F	Focus	—	—						6-6
45294	HD24534	3h 49m.1	+30° 45'	23 22	23 38	00 08W	+31 00	Fe/—	3-3
45295	HD25638	03h 59m.1	+62° 04'	23 56	00 57	01 15W	+62° 18'	—/Hg	B-1
45294T	Spot Calc for 45294.			15min@	7V@02	5450	5450	5450	
45295T	Spot Calc for 45295			15min@	15V	V4 5400	D3 4300	D3 4800	
45295F	Focus Test							Fe/—	18

Spectr. Temp. +40°F ..... Dome Temp./Hum. +39°F/85% Transparency Conditions ..... Clear 38

Focus ... 506 .....

Spectr. Temp. ..40°F..... Dome Temp./Hum. 38°F/92 .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								1		probable exp with star	
800/40	4"	6.5	Ope	BC/IT	150/485	35	IIa D-e	2	Wh Van em		
400/249	4"	7.15	BOY	BC	830/68	BS	IIa-O E	A	EB-Blm	Cloud lost 30m NW of pair	exp ok sl. unsharp
							IIa D-e				
							IIa O-e				
				BC	830/68	BS	IIa O	A	set 506 T=40°F		

39

Date ..... Observers .....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
~~45296~~	~~HD 224014~~	~~23h 19.9~~	~~+56° 51~~	~~22h 38~~			~~+23° 57 49~~	Fe – 102/103	5 5

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....40.

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~~400/~~	~~3"~~	~~V 9.4~~	~~FB Imp~~	~~BC~~	~~1200/7~~	~~* 150µ~~	~~098 -02E~~		~~Ave Prog~~	~~* 308 240F V" filter tape~~	

41

Date Thurs/Fri. Dec. 4/5 Observers G.S. - R.I. - ~~Sch~~ S.L.

Evacuated 8h

Emulsion Batches:
IIaOe 13050-26110
* IIaO E13050-04120

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45296F	focus test							Fe/—	18 18
45296	HD 203064	21h 14.7	+43° 31'	17:15	17:22	00h 42m W	+43° 53	Fe/ND	13-3-3
45297	HD 197419	20 38.5	+35° 06	17:27	17:53	01h 50m W	+35° 23	Fe/ND	13-3-3
45298	HD 201345	21 03.9	+33° 00	18:08	19:25	02h 56m W	+33° 20'	Fe/ND	13-3-3
45298T	spectral tr plate	45296 -	45307		15 sec @ 15 volts	D4 3900	D3 +305	D2 4810	
45299	HD 210239	22h 08.1	+58° 55'	19:38	19:48	02h 16m W	+59° 17'	Fe/ND	
45300	HD 214930	22 36.6	+23° 19	19.57	20:42	02h 41m W	+23° 46'	Fe/ND	13-3-3
45301	HD 4142	00 38.9	+47 19	20:53	21:06	01h 01m W	-47° 46'	Fe/ND	13-3-3
45302	HD 11606	01 48.8	+58 47	21:11	21:55	00h 40m W	+59° 10'	Fe/ND	13-3-3
45303	HD 29866	04 37.3	+40° 36	22:05	22:23	01h 39m E	+40° 45'	Fe/ND	13-3-3
45304	HD 30650	04 44.4	+43° 24'	22:32	23:20	00h 51m E	+43° 32'	Fe/ND	13-13-3
45305	HD 34078	05h 09.7m	+34 12'	23:23	23:46	00h 50m E	+34° 18	Fe/ND	13-13-13
45306	HD 36576	05 27.7	+18 28'	23:49	23:59	00h 54m E	+18° 35	Fe/ND	13-13-13
45307	HD 37737	05 35.7	+36° 09	00:03	01:53	00h 51m W	+36° 13'	Fe/ND	13-13-13
45308	HD 37657	05 35.1	+43° 00'	01:59	02:40	01h 38m W	+43° 05	Fe/ND	13-13-13

Spectr. Temp. ...26°F..... Dome Temp./Hum. ...-06°C...72% Transparency Conditions ...hazy.....42

Focus .....510.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC,	830/.680	BS	IIaO-E	A		26°F 510	cont sl red
40/35		4.98	O8V	BC	830/.680	BS.	IIaO-E	B	Runaway*		fine
400/303		6.52	B0IIe	BC	830/.680	BS.	IIaO-E	A	"		fine
400/300		7.53	ON9V	B.C.	830/.680	B.S.	IIaO-E	B	"		fine
							IIaO-E				
400/300	3"	5.29	O6f	B.C.	830/.680	B.S.	IIaO-E	A	"	26°F	fine
400/304		7.39	B2V	B.C.	830/.680	BS.	IIaO-E	B	"		fine
200/150		5.53	B5V	B.C.	830/.680	BS	IIaO-E	A	"	only part of spectrum adjusted acc p.h. clamped one side only?	
400/304		7.08	B2Vne	BC.	830/.680	BS	IIaO-E	B	"		v sl str
200/150		5.87	B8IIIn	BC	830/.680	BS.	IIaO-E	A	"	24° 511	sl str.
400/300		7.47	B6V	B.C.	830/.680	BS.	IIaO-E	B	"		sl str. sl fuzzy
200/150		6.18	O9.5V	BC.	830/.680	BS	IIaO-E	A	"		sl str.
80/60		5.71	B2IIIVe	BC	830/.680	BS	IIaO-E	B	"	23°F	fine
400/300		8.31	O9.5III(n)	BC.	830/.680	BS	IIaO-E	A	"	-	v sl str.
400/300		7.22	B3Vne	BC	830/.680	BS	IIaO-E	B	"	22°F 512	fine

43 #2

8" 68°

Emulsion Batches: *Tech-E 13050-04120 21 211

Date Tues/Fri Dec 4/5 (con't) Observers G.i.s - Ri

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45309	HD 39680	5h 49.0m	+13° 49'	02:45	04:00	02h 45m W	+13° 54'	Fe/[illegible]	13-13-[illegible]
45309T ✓	optical tn plate	45308-			15mm @ 15 Volts		D4 3900 D3 4300	D2 4810	
45310	HD 43112	6 09.5	+13 53	04:04	04:15	02 39 W	+13° 54'	Fe/ND	3-13-3
45311	HD 44172	6 15.3	+14 45	04:19	05:31	03 49 W	+14° 47'	Fe/ND	3-13-3
45312	HD 89449	10 14.3	+19 59	05:36	05.51	00 10 W	+19° 37'	Fe/ND	13-13-[illegible]
45313	HD 112028	12 48.3	+83 58	06:04	06:16	01 55 E	+83° 33'	Fe/ND	13-[illegible]
45314	HD 112028	12 48.3	+83 58	06.18	06.34	01 38 E	+83° 33'	Fe/ND	13-13-13
45315	HD 107328	12 15.3	+3 53	06:42	06:58	00 41 E	+3° 21'	Fe/ND	13-13-13
45315F	focus test							Fe/-	15-4

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions thin. cirrus. clouds. o.v. 30 .. 44

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..-9°C / 67% .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
800/600	3	8.01	O6.5V ne	B.C.	830/.680	B.S.	IIaO E*	A	Runaway +	N. component of double.	v sl wk
							IIaO-E*				
80/60		5.67	B1V	B.C.	830/.680	B.S.	IIaO E*	B	"		
400/172		7.29	B6V	B.C.	830/.680	B.S.	IIaO E*	A	"	Cloud	
200/170		5.3	F6IV	B.C.	830/.680	B.S.	IIaO E*	B	Std. Velocity		Fine
200/157		5.28	B8	B.C.	830/.680	B.S.	IIaO E*	A	Shell - Bkg	21°F lower star in periscope	sl str
200/155		5.28	B8	B.C.	830/.680	B.S.	IIaO E*	B	"		sl str
200/202		6.1	K1III	B.C.	830/.680	B.S.	IIaO E*	A	Std Velocity		v sl str
				B.C.	830/.680	B.S.	IIaO E*	B		21°F 512	contrsl Red

45

Date Dec. 3/6. 1980 Fri. Sat Observers Cruz - Ri - Sh

8m 68s
evacuate 12 hrs

Emulsion Batches:
Tech-E 29070-05120 22 209
Tech-E 29070-05120* 22 209

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45316F	focus test							Fe/—	8
45316	HD 212943	22h 22m.8	+4°12'	17:27 00	17:41	00h 04E	+4° 32'	Fe/ND	12-13
45317	T CEP	21h 8m.2	+68°05'	18:06	18:21	1h 54 W	+68°26	Fe/ND	13-13
45318	χ CYG	19h 46m.7	+32°40'	18:48	18 56	3h 49 W	+32°52	Fe/ND	13-13
45319 ✓	χ CYG	"	"	18:58	19:17	04h 10W	+32°53	Fe/ND	13-13
45319T	spectral test plates	45316-19							
45320	RT CYG	19h 40.8	+48°32'	19:25	19:41	05h 36W	+48°46'.7	Fe/ND	13-13
45321	O CET	2h 14m.3	−3°25'	20:50	21:14	−00 24E	−03°03'.7	Fe/ND	13-13
45322	O CET	"	"	21:17	22:03	00h 27 W	−03°03'.7	Fe/ND	13-13
45323	R LEP	4h 55m.1	−14°57'	22:15	23:43	−00:34	−14 49	Fe/ND	13-13
45324	S CMi	7h 27m.3	+8°32'	23:53	01:53	00h 51E	+8° 23	Fe/ND	13-13
45324T ✓	spectral test plates	45320-				15 sec @ 15 Volts	D4 3900 D3 4300	D2 4919	
45325	R CrC	8h 11m.1	+12°02'	1:58	2:54	1"38 E	+11° 47	Fe/ND	13-13
45326	V CrC	8h 16m.0	+17°36'	2:59	4:58	1h 20m W	+17° 22	Fe/ND	13-13-13
45327	T UMa	12h 31m.8	+60°02'	5:07	6:36	1h 16m E	+59° 36'	Fe/ND	13-13
45327F	focus test							Fe/—	13

Spectr. Temp. ..... Dome Temp./Hum. ..-06°C..7.0% Transparency Conditions CLEAR W. SCATTERED CLOUD 4.6

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..-05°C..69% THIN CLOUD ALL OVER SKY AFTER 4 A.M.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B.C.	83m/.650	BS	IIaO-E	A		29°F 510	OK
2m/2m		5.9	K0III-IV	B.C.	830/.650	BL	IIaO-E	B	Rad. Vel.		fine
400/400	2"	6.0	M5e-M9e	B.C.	830/.680	150/3	IIaO-E	A	Cnv Miras	15m (B-V≈1.5)	sl wk
200/200		5.3	S7-10?	"	"	"	"	B	Cnv Miras	8m (B-V≈1.8)	fine
209/400		5.3	S7-10?	"	"	"	IIaO-E	A	Cnv Miras	19m (B-V≈1.8)	fine
400/400		7.7	M2-M10e	B.C.	830/.680	150/3	IIa-O E*	B	Cnv Miras	78m tele limit (B-V≈1.5)	good
200/301		6.1	M5e M8e	B.C.	830/.680	150/3	IIaO E*	A	Cnv Miras	24m (B-V≈1.2)	strong
200/600		6.1		"	"	"	"	B	Cnv Miras	46m (B-V≈1.2)	strong
400/500		2.	N6?	"	"			A	Cnv Miras	88m (assume B-V≈5.3!)	NADA
400/500	1-2	8.0	M6e-M8	B.C.	830/.680	150/3	IIaO-E*	B	Cnv Miras	120m (B-V≈1.5)	sl wk, d unsym, poor red focus
							IIaO-E*				
500/500		7.2	M6e-M8e	B.C.	830/.680	150/3	IIaO-E*	A	Cnv Miras	56m (B-V≈1.5)	exp fine red soft
400/265		8.7?	S9e-S10e?	"	"	"	"	B	should be * (Band) m_{pg}~9.2	119m (B-V≈1.5)	v sl weak red fuzzy
400/200		8.7?	M7e-M8e	"	"	"	"	A	should be * (Band) m_{pg}~8.9	89m (B-V≈1.5)	good
						151/3	IIaO	B		29°F 510	v sl red

47 Wed-Thurs.

Date 1980 DEC. 10/11 Observers B.M.-T.M.

Emulsion Batches: IIIa-J-C 07109-02120 15 248

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45328 ✓	HD33328	5 11 9	-8° 53	01 11	02 08 17.5V	02 02 W 15V	-8 42 15V	Fe/-	12-12-12
45328T	Spot Calib	For 45328		15min @ D4	3900	4300	4810		
45328F	Focus Test							Fe/-	12-12
				~~00.14~~					12

Spectr. Temp. 28° F ..... Dome Temp./Hum. 16° F / 92 % Transparency Conditions ... clear by 01h ..... 48.

Focus . 510 .....

Spectr. Temp. 26° F ..... Dome Temp./Hum. 12° F / 93 %

slightly hazy + occ clouds. Trem

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/141	SHIT	4.07	B2IIe	BC	8301.68	BS	IIIaJ-e	A	Be-Bln	Cloud (Contin' shadow (IIIaJ elliptical) distinct fine	
							IIaJ-e				
							IIIa-O	A		T=26° F F=510	Right on
101											

49 [illegible]

Date Thurs/Fri. Dec. 11/12 '80 Observers Gus - Jn

Emulsion Batches:
8" 68° D.O.-E 29070 [illegible]
19 202

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45329	HD 223460	23h 44.6m	+35° 53'	17:18	18:39	00h 04m E	+36° 17'	Fe/ND	13-12-13
45329 T	Spec Calib For 45329-32.				15 min @ 15V	D4 3900	D3 4300	D2 4760	
45330	HD 29866	04 37.3	+40° 36'	00:14	00:38	01 03 W	+40° 50'	Fe/ND	13-13-13
45331	HD 30650	04 44.4	+43 24	00:42	02:05	02 22 W	+43° 40'	Fe/ND	13-13-13
45332	HD 34078	05 09.7	+34 12	02:11	02:39	02 31 W	+34 22	Fe/ND	13-13-13
45332 F	Focus							Ref	16-16

Spectr. Temp. +24.0°F ..... Dome Temp./Hum +18F / 80% Transparency Conditions ..... Cloudy 50

Focus ..... 512 .....

Spectr. Temp. ~~+21.5°F~~ ..... Dome Temp./Hum +17° / 96%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/407	3.4	5.9	G5 II	B.C.	830/.68	B.S.	IIaO E	A	Flare?		fine
							"			TAKEN THROUGH GLASS	
400/307	3"	5.87	B8 IIIn	"	"	"	"	B	Runaway *	T=23°F	fine
400/300	2-3"	7.47	B6 V	"	"	"	"	A	"		fine
400/211	"	6.18	O9.5 V	"	"	"	"	B	"	Clouds	v. wk
							IIaO	B?	slight doubt	T=21.5°F	Coast=1 Ref

51 SAT-Sun

Date Dec. 13-14/80 Observers BK-TA

Emulsion Batches: IIa-O-e 29070 - 08120 16 193

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45333F	Focus Test							Fe/—	16-16
45333	HD 222368	23 34.8	+15 05	17 16	17 29	0 55 E		Fe/—	16-16
45334	HD 187691	19 46.2	+10 10	17 32	18 01	3 23W	+10 29	"	-16
45335	HD 194003	20 18.6	+39 52	18 05	18 06	2 58W	+40 15	"	-16
45336	HD 200003	22 00.2	+32 27	18 12	20 04	3 13 W	+32 55	"	B-13
45336T	Spot Calib For	45333-36		15 min @ 15V		D4 3900	D3 4300	D2 4810	

Spectr. Temp. +30°F ..... Dome Temp./Hum. 125°F/72% Transparency Conditions 5.2

Focus .... 21.0 .....

Spectr. Temp. + ... Dome Temp./Hum. 112° / 85%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/68	BS	II-O	B			control
40/37	6"	4.6	F7V	BC	830/68	BS	II-O	B	std vel		Fine
40/40	4"	5.6	F8	"	"	"	"	A	Waterlow		fine
40/40	"	2.0	F8	"	"	"	"	B	"		fine
30/	5"	7.5	G5	"	"	"	"	A	"		fine
							"			only 2 exposures	

53 Sun Mon

Date Dec. 14-15 /80 Observers W.Ir.-Tn. / KK-Tn.

Emulsion Batches: 098-02E ; IIaJ 4b 07119-02120 (5" 68) 13 243

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45337F	Focus Test								
45337	HD 210943	22 22.8	+4 12	17 26	17 45	0 35 W	+		
45338	HD 9138	01 24.9	+5 38	17 56	18 08	2 05 E	+16 04		
45339	HD 47105	06 31.9	+16 29	01 14	01 23	0 05 W		Fe/—	
45340	HD 56986	07 14.1	+22 10	01 30	02 08	0 08 W		Fe/—	
45341	HD 65751	07 59.9	+20° 0′		02 14	W		Fe/—	
45340DT	Spot Calibration for 45339-40			15m	04	17:50 15V 3400 4500	15V 4800		
45340F	Focus								

Spectr. Temp. 22 °F Dome Temp./Hum. +16°F / 72% Transparency Conditions .. haze 54

Focus 520

Spectr. Temp. 18°F Dome Temp./Hum. /

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	150/.485	150/10		A			right on
200/35	4"	5.9	K0 III-IV	"	"	150/5	098-03E	B	std/vel	* Too much comp. only 1st comp.	1 s1 str
200/34	4"	5.1	K4 III	"	"	"	"	A	"		s1 str
20/130?		1.9	A0 IV	"	1200/.001	65	IIIaJ+b	A	Asm. Sp/KIC	Spec 18°F F 509 40 gain 1+0 bot, digitonin red Radium gives 4 s' on 40 gain	s1 str
40/425	3-4	3.9	F0 IV	"	"	"	"	B	"		fine
200/	"	7.1	dF-8	"	"	"	IIIaJ+b	A	"	kept for Cen	1.0 thin
							IIaJ+b				
				BC	1200/.025	65	IIa O	?	set 509		cool red

Eu

55 Tues/Wed

Date Dec 16/17 1980 Observers RM-T / BL-T

8h 68° Emulsion Batches: IIIa-e 29080 08120 18 218

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45341F	Focus Test			17:09				Fe/L	18/18
45341	HD 222368	23 34.8	+25°05	17:15	17:30	00 43E	+5° 3[illegible]	F/[illegible]	[illegible]-18
45342	HD 186658	19h 4[illegible].8	+29°01	17:35	19:07	01 41W	+29 15	Fe/[illegible]	[illegible]-3
45343T	Spot Cal for 45341-43			15m	0 15V	D4 390	D3 4300	D2 420	
45343	HD 83021/2	10h 03m.8	+20°49'	01:45	03 38	01 02E	+20° 3[illegible]'	Fe/[illegible]	15-16

Spectr. Temp. 24°F ..... Dome Temp./Hum. +27°/80% ..... Transparency Conditions Clear - Cloudy

Focus 511

Spectr. Temp. T= 4°F ..... Dome Temp./Hum. -3°F/30% .....

56

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/				BC	830/.68	BS	IIaO E	B			sl rec
40/31	5"	4.6	F IV	BC	"	"	A	A	Std Vel		v sl sm
40/34		6.9-17	F0-G1	"	"	"	"	B	Capt/Evans		exp. fine
							"				
400/67	.78"	7.20	955 +A2	BC	830/.68	BS	IIaO E		VII-Olu	T=+18°F Set 573	sl weak
										wrong grating tilt on slit	
										I found tilt to be exactly 0.58 prob setting bad lighting	

57

Date Thurs/Fri. Dec. 18/19 Observers Gis - Tn

7m 68° Emulsion Batches: IIaO E 29070 - 08120 18 198

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45344	HD 37657	$5^h\ 35^m.1$	+43° 00′	00:11	01:12	$01^h\ 04^m$ W	+42° 58′	Fc/ND	12-13-13
45344T ✓	Spot Calc for 45344-		46		15min @ 15V	D4 D3 3000 +300	D2 +4812		
45345	HD 43112	6 ~~9.5~~	+13 53	01:18	01:38	00 57 W	+13 47	F-ND	13-13-13
45346	HD 44172	6 15.3	+14 45	01:41	02:51	02 03 W	+14 40	Fc/ND	13 13 13

Spectr. Temp. +30°F ..... Dome Temp./Hum. +20°F/80% Transparency Conditions ..... Clear, very 58

Focus ... 510 .....

Spectr. Temp. +25°F ..... Dome Temp./Hum. +18°F/92% snow

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/300	3"	7.22	B3 V ne	B C.	830/.68	BS	IIaO E	A	Runaway *	+30°F 510	v sl str
							"				
200/160	3"	5.67	B1 V	BC	830/.68	BS	"	B	Runaway *		sl str
400/84	3"	7.29	B6 V	BC	830/.68	BS	"	A	Runaway *	some cloud	fine

59

Date Fri/Sat 19/20 Dec 1980 Observers Blu-Tu

Emulsion Batches:
III-aJ-E 07119 - 07120 14 243
098-02-E 07119 - 29110 ?20 186
was listed as 29120 ?

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45347F	Focus Test			17:00				Fe/-	18-15
45347	HD200120	20H56M.4	+47° 03'	17:13	18:06	02 44 W	+47° 30'	Fe/-	12-12-12
45348	HD 200120	20H56M4	+47° 08'	18:11	19:23	04 01W	+47° 30'	Fe/ND Ne/-	12-12 12-12
45347T V	Spot Calc for	45347		15min @ D4	17 15V 3400	15V 4300	15V 4800		
45348T	Spot Calc for	45348		15min @	15V D3 4800	7V D1 Hα	7V D2 5450		

Spectr. Temp. 21°F ..... Dome Temp./Hum. 12°/68% ..... Transparency Conditions ..Clear - Cloudy from SW 60

Focus .512 .....

Spectr. Temp. ..... Dome Temp./Hum. ...../.....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	IIa-01	A		T=21°F 512	cent vsl red Fuzzy edges
40/160	3"	4.51	B1e	BC	830/.68	BS	IIIa-JE	A	Be-Blu	Grating tilt actually 0.678	Fair
200/176	3-4	4.51	B1e	BC	1200/0.7	150/.7	098-02E	B	Be-Blu	T=1.0°F and 50+509 E=19°F V-Filter over slit Cloud	
							IIIaJ-E			Partial close down	
							098-02E				

61 Pg #1

Date . Sat/Sun . . . 20/21 Dec Observers Ly-Tn

Emulsion Batches:
. . 0.98:02.E 07119-21 . . . 0 ? 190
. . IIa-0 . . 07119 -15 120 4 250
. . IIa-0 . . 29070 -16 120 16 198

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45349	HD223460	23 44.6	+35 53	20:13	21:20	313 W	+36 18	Fe/ND Ne/-	8-8
45349T ✓	Spot Calc for 45349-50.			15min @ 4810	15V D3	7V D1 Hα	7V C2 5450		-
45350	HD5394	00 50.7	+60 11	21:33	21:38	2 24W	+60 35	Fe/ND -/-	12-12
45351	"	"	"	21:49	21:54	2 40W	"	Fe/-	18-18
45351T ✓	Spot Calc For 45351		15min@D4		17.5V 3900	15V 4300	15V 4810		
45352	HD1337	00 12.4	+50 53	22 03	22 39	4 03W	+51 20	Fe/ND	13-13
45353	"	"	"	22 40	23 13	4 37W	"	"	13-26-13
45353T ✓	Spot Calc for 45352-62			15min @ 15V	D4 3900	D3 4300	D3 4810		
45354	HD10260	01 35.3	+60 32	23 20	00 20	4 21W	+60 53	Fe/-	4-4
45355	HD28363	04 23.3	+15 57	00 27	01 24	3 36W	+16 06	Fe/-	4-4-4
45356	HD28226	04 22.1	+21 24	01 33	02 00	3 13 W	+21 36	Fe/-	11-4-4
45357	HD28911	04 28.2	+13 02	02 04	02 55	4 02 W	+13 11	Fe/-	4-4-4
45358	HD41335	05 59.4	-06 42	02 59	03 21	2 58W	-6 41	Fe/-	4-4-4
45359	HD47129	06 32.0	+6 13	03 25	04 15	3 19 W	+6 06	Fe/-	4-4-4
45360	HD94118	10 46.7	+46 20	04 22	05 22	0 41 W	+45 50	Fe/-	4-4

Spectr. Temp. 20°F ..... Dome Temp./Hum. +0°F / 85% Transparency Conditions Clear by 19h ..... 62.

Focus .... 5.09 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... / .....

Delay at beginning due to shutter problem cloudy for most of observing

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/205	3"	5.9	G5IV	BC	1200/0.7	150/.5	048 - 02E	B	Flare	no V filter 4 cal	
"	"	"	"	"	"	"	"	"	"	"	"
40/60	3"	2.43	B0e	BC	1200/0.7	150/.9	"	A	Be - Bln	V filter taped over slit	eight struck
40/160	3"	"	"	BC	1200/-.025	BS	IIIa-J-e	B	"		uncert ? Struck
			"				IIIa-J-e				
200/220	3"	6.08	09III	BC	1200/-.025	BS	IIaOe	A	MSB - Ly		v s/wk
200/220	"	"	"	"	"	"	IIaOe	B	"		"
							"			not labeled (unc. 5 2e)	
200/220	2"	5.5	B1	BC	1200/-.025	BS	IIIaOe	A	SB - Ly		v s/wk
200/220	2"	7.1	F7V	BC	"	"	"	B	Hyades - Tur	16°F F:510	s/wk
200/200	2"	6.0	A0	"	"	"	"	A	Hyades - Tur		s/wk
200/150	2"	7.0	F5V	"	"	"	"	B	Hyades - Tur		wk
200/206	3"	5.2	B2e	"	"	"	"	A	Be - Bln		fair
200/160	2"	6.1	08	"	"	"	"	B	MSB - Ly	T 15°	fair
200/193	2"	7.1	A2	"	"	"	"	A	SB - Ly		fair

63 pg #2

Date 20/21 Dec CONT'D Observers L.J. - T.A.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45361	HD 98547	11 15.2	+17 52	05 57	07 05	1 24 W	+17 25	Fe/-	4.44
A5362	HD 89449	10 14.3	+19 59	07 07	07 15	2 36 W	+19 33	Fe/-	7-7
+5362F	focus.					"	"	Fe/-	1-7

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... good 6.4

Focus 510

Spectr. Temp. ... 14°F ..... Dome Temp./Hum. ... 9°F / 97%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/185	2"	6.9	A0	BC	1200/.025	BS	IIaO-e	B	EB - Lg.		Fine
40/40	3"	5.3	F6 IV	"	"	"	"	A	Stnd		Fine
							IIaO	B			control

65 pg #1

Emulsion Batches: D-D-2 - 20120

Date Dec 21/22 '80 Observers WL. F.N.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45363F	Focus	—	—					Fe/NO	2/2
63	HD212943	22h 22m.8	+4° 12'	17:35	17:37	0 54m W		"	1/1
64	"	"	"	17:37	17:39	0 56m W		"	1/1
65	Comp. To Succ.	19 40.8	+29 01	17:45	17:55	3 54 W		"	1/2
45366F	Focus	—	—					"	2/2
66	HD 9138	1h 24.9	+5° 38'	19m 13m	19h 18m	027m E			1/1
67	" "	"	"	19h 16m	19h 20m	025m E			1/1
45365	HD 4004	0h 57m.5	+64° 14'	19h 31m	20h 07m	1h 10m E		"	1/1
45364F	Focus	—	—						2/2
45369	HD 9974	1h 32m.4	+57° 39'	20h 24m					1
45369	HD 9974	1h 32m.4	+57° 39'	20h 40m	22h 01m	1h 9m W		"	1/1
45370F	Focus	—	—					"	2/2
45370	HD 17638	2h 4m.8	+56° 31'	22h 22m	23h 06m	2 01 W			1/1
45371	HD 16523	2h 33.9	+56° 18'	23h 20m	00h 1m	3 08 W		"	1/1
71F	Focus	—	—						2/2
71	Spot Cals	for 45[illegible]-72.		15m @ D3					

Spectr. Temp. ..... Dome Temp./Hum. 44°F/80% Transparency Conditions .... Excellent at start
Scattered clouds later 66
Focus .....
Spectr. Temp. ..... Dome Temp./Hum. ...../.....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	2"							1			
200/5	2"	5.9	K0 III-IV	I TBC	150/.480	150/.5	IIaD	2	STD Vel.	Many overlaps	
11	"	5.9	"		"	"	"	3	" "	compare with 45337	
800 2		~11	?		"	"	"	4	Evans eccpl.	Stopped by cloud	
—							"	1		refocused IT	
200/5		5.1	K4III		"		"	2	STD Vel.	compare with 45311	Str.
200/7		"	"		"	"	"	3	"		Str.
800/30		10.5	WN		"	"	"	1	Wh WR		
								1			
800/	2"	10.7	WN.		"	"	"	2	Wh WR.	Exposure wrong*	
800/24		10.7	WN		"	"	"	3	Wh WR		ok
								1			
800/35	1"	11.0	WC6		"	"	"	2	Wh-WR	*	[illegible]
800/32	1"	10.5	WC6		"	"	"	1	Wh-WR	Discarded wh. *	Bad focus
—								2	"		

67 Pg #2

Date ..... Observers KK-TL.....

Emulsion Batches:
IIaO e 29070 - 20L.0
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Ex
45372	NGC 2392	1950 7 28.0	1950 +20° 57'	0 34	0:49			—	—
45373	HD 66751	7 59.9	+70° 01'	01 07	01:47	0 35E		Fe/—	44
45374	HD 76151	8 49.4	-5 4	01:53	02:43	0 23E		Fe/—	444
45374T ✓	Spot Cals for 45373-			15min @ 15V		D4 3900 D3 4300 D2 4800			
45375	HD 66141	7 57.1	+2 36	02 48	03:09	0 46W		Fe/—	4-4
45376	HD 99028	11 18.7	+11 05	03 06	03 11	2 25 E		"	6-4
45377	HD 103095	11 47.2	+38 26	03 17	03 56	~~3 45~~ E		"	4-4
45378	HD 121370	13 49 9	+18 34	04 02	04 04	4 03 E			6 -
45378F1	Focus Test							Fe/—	17
F2	Focus Test							Fe/—	32
71 T ✓	Spot Cals	for 4[illegible]-72.		15min @ 15V					

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... haze .....

Focus ... 509 .....

Spectr. Temp. .16° ..... Dome Temp./Hum. ...10°/92% .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
—	1"-2"			BC/IT	830/.407	LPR.	IIaD	IT	PN/KK	strong at 5007 near Full Moon, unfortunately	Dark fairly good
400/440	2"	7.0	dF8	BC	1200/-.025	BS	IIaO-e	A	Asm Sp/KK	T=18° F=509 (fell apart fog?)	slightly streaked
200/-45	2"	6.67	dG3	"	"	"	"	B	"	RH=100%	fine
							"				
200/260	3"	5.5	K2 III	BC	1200/-.025	BS	"	A	Std Vel		good
40/42	2"	4.4	F2 IV	"	"	"	"	B	Asm Sp		fine
400/410	2"	6.45	G8 V	"	"	"	"	A	"		good
40/42	3"	28	G0	"	"	"	"	B	"	cloud + 100% Hi	good
				"	"	"	"	A		end broken off	can't tell blue
				"	"	KS	"	B			
											?
										* plates loaded backwards	
										(Only the last 3 plates have this problem.)	
										It may be due to that loose clamp	
										I noted on last exposures	
										I didn't put all last 3 plates in backwards	

69

7m 68.5 Emulsion Batches: 29070 – 20120 17 305

Date Dec 26/27 Fri/Sat. 1980 Observers Inr.-Ri

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45379	HD 27383	4h 14m.2	+16° 28'	0h 05m	0h 52m	2h 39m W	+16 32.1	Fe/ND	13-13.5
45379F	spectral tri plate	45379-	81,			15mm @ 15 Volts	D4 3900	D5 4330	D2 4810
45380	HD 28911	4 28.2	+13 02	01 00	01 32	3 05 W	+13 15.5	Fe/ND	13 13/3
45381	HD 27989	4 20.0	+18 39	01 37	02 10	3 50 W	+18 53.5	Fe/ND	13-26
45381T	focus test							Fe/—	13-13

Spectr. Temp. 21° Dome Temp./Hum. -10°C 96% Transparency Conditions Partly cloudy 7D.

Focus 512

Spectr. Temp. 20° Dome Temp./Hum. -10°C 97%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/300	2"	7.44	F8 V	Bc	830/.68	BS	IIaO-e	A	Tnr - Hyad Bin		Fine
400/300	1-2"	7.05	F5 V	"	"	"	"	B	Tnr-Hyad. Bin.		Fine
400/100	2"	8.21	G6 V	"	"	"	"	A	Tnr-Hyad Bin.	Clouds ! at ⅓ exposure	w/t cent
				"	"	—	"	B		20°F 512	s/rel

Exp.

71

Emulsion Batches: IIaO E 29070 - 20120 ... 18 197
even E/4 hrs IIaO E 29070 - 30120 ... 16 186

Date Dec. 29/30 Mon/Tue 1980 Observers ..Thr.-Ri.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45382	HD 28363	4 23.3	+15 57	01:36	02 42	04 31 W	+16 10.6	Fe/-	4-4-4
45382T ✓	spectral tri plate	45382-86				15 mm @ 15 Volts	D4 3900	D3 4300	D2 4810
45383	HD 47129	6 32.0	+6 13	02 47	03 54	03 34 W	+6 15.1	Fe/-	4-4-4
45384	HD 124897	14 11.1	+19 42	04 01	04 17	03 39 E	+19 22.3	Fe/-	4-4-4
45384F	focus test							Fe/-	17-17
45385	HD 124897	14 11.1	+19 42	04 32	04 33	03 24 E	+19 22.3	Fe/ND	13-13-13
45386	HD 111456	12 44.3	+60 52	04 43	05 28	01 01 E	+60° 26'	Fe/ND	13-13-13
45387 ✓	HD 115043 A	13 09.5	+57 14	05 34	06 59	00 06 W	+56°52	Fe/ND	13-13-
45387T	spectral tri plate	45387-				15 mm @ 15 Volts	D4 3900	D3 4300	D2 4810
45387F	focus test							Fe/-	13-13

Spectr. Temp. ...35..... Dome Temp./Hum. -06°C 10% Transparency Conditions .clear up but very windy... T2

Focus ....506.....

Spectr. Temp. ..... Dome Temp./Hum. -14°C 85%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/180	3"-4"	7.12	F7 V	BC	1200/-.025	BS	IIaO2	A	Tnr-Hyad. Bi	1/3 exposure only. v	wk
							IIaE				
400/262	"	6.08	O8 III	"	"	"	"	B	Ly Prog.	½ exposure, clouds 32°F 506	wk
40/74	"	1.29	K2 IIIp	"	"	"	"	A	Std. Vel.	clouds	s/str Fine cent vs/red
					"			B		28°F 506	
20/20	"	1.29	K2IIIp	"	830/.680	"	"	A	Std. Velocity	28°F SET 510	s/str
400/300	4-5	6.31	F7 V	"	"	"	"	B	Tnr-UMa		Fine
400/300	"	7.42	G1 V	"	"	"	IIaE*	A	Tnr-UMa	26°F SET 511	Fine
							IIaE*				
							IIaE*	B		21°F SET 511	OK

73

Date Dec 30/31 80 Tues/Wed Observers Lz - Ri

7" 68° Emulsion Batches: IIa-E 23070-30120

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45388F	focus					00 35W	+25 27	Fe/-	12-17
45388	HD 218356	23 02.2	+24 56	17+33	19:19	02 34W	+25 27	Fe/-	4-4
45388T ✓	optical tm plate	45388-			15min @ 150 volts		D4 3900 D5 4300 D8 4810		
45389	HD 37383	04 14.2	+16 18	21:43.	01:00	03h 04W	+16 31	Fe/-	4-11
45390	HD 47105	06 31.9	+16 29	01 10	01:28	01 14W	+16 29	Fe/-	6-6
45391	HD 61421	07 34.1	+05 29	01 31	01:36	00 20W	+05 20	Fe/-	1-6
45391F	focus					00 22W	+05 20		

Spectr. Temp. ..20..... Dome Temp./Hum. -12°C / 78% Transparency Conditions ..lots of cirrus..... 74

Focus ....509.....

Spectr. Temp. ..... Dome Temp./Hum. -15°C / 50% Poor all night

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/-.025	BS	IIaO-E	A			cont red
400/328	>5	6.1	K0IIIb	B.C.	1200/-.025	BS	IIaO-E	B	H+K - Ly	clouds.	wk
							IIaO-E				
800/347	>5	7.4	F8V	BC	1200/-.025	BS	IIaO-E	A	Hyades - Thr	16° 509 clouds	wk
40/50		1.9	A0III	"	"	"	"	B	Asm - KK	14°F 510	s/str
40/58	BAA	0.7	F5III	"	"	"	"	A	Std U.	& CM.	s/str
				"	"	"	"	B.		14°F 510 Cirrus 4	cont s/str
										horrendous seeing.	

75 1981

Date Fri/Sat Jan. 2/3 Observers GIS - Tn

7m 68° Emulsion Batches: H-0-9 13050 -3-120

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45392F	focus test							Fe/—	16-16
45392	HD 207064	21h 14.7m	+43° 31'	17:34	17:50	3h 05m W	+43° 56'	Fe/ND	13-13-3
45393	HD 210839	22h 08.1m	+58 55	17:55	18 09	2 30W	+59 32	"	13-13-E
45393T	Spot Cals for 45392+				15m @ 15V	D4 3900	D3 +100	Fe 1050	
45394	HD 4142	00 38.9	+47 19	18:14	18:39	0 28 W	+47 48	Fe/ND	F-B-3
45395	HD 29866	04 37.3	+40 36	18:47	19.55	2 16 E	+40 47	Fe/ND	B-B-E
45396	HD 34078	05 09.7	+34 12	20:04	22:32	0 09E	+34 18	Fe/ND	2-B-3
45397	HD 36576	05 27.7	+18 28	22:40	23 58	1 00W	+18 32	Fe/ND	13-0
45397F	Focus							Fe/—	B-B

Spectr. Temp. +16°F Dome Temp./Hum. +2°F / 75% Transparency Conditions . Hazy - partly cloudy 76

Focus . 514

Spectr. Temp. +1.5° F Dome Temp./Hum. -9°F / 80%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					830/.680	BS	IIaO	A		514 +16° F	Cent sl cast
70/60	5-8"	4.98	O8 V	B.C.	"	"	I.O-E	B	Runaway ★		Fine
80/60	5"	5.29	O6f	"	"	"	"	A	"		"
							"				
80/60	~8"	5.53	B5V	"	"	"	"	B	"		Fine
80/60	8"	5.87	B8IVn	"	"	"	"	A	"		Fine
100/150	8"	6.18	O9.5V	"	"	"	"	B	"	516 +9° F	Fair
200/81	3-5-8	5.71	B2 IV-V e	"	"	"	"	A	"	518 snow +4° F	sl wk
				"	"	"	IIIaO	A		+1.5° F Sol 517	OK

77

Date Sat-Sun Jan 3/4 Observers R&E-T.R.

7" 68° Emulsion Batches: II a O-e 29.70 - 30420 (68°)

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
453956	HD 219449	23 10.7	−9 36	17 44	18 04	1 25 W	−9 05	Fe/ND	19-19
45399	HD 6288	0 58.7	+0 50	18 12	19 38	1 11 W	+1 15	U	19-19
453997 ✓	Spot Cals for 45398 - 400				15 min @ 15V			D4 3900 D2 4310	D2 4810
45400	HD 15524	2 24.6	+24 48	19 44		W	+25 08	Fe/ND	18-
4-3995	Focus Test							Fe/-	16-16
45400	HD 71152	8 20.7	+24 52	1 07	2 50	0 25 E W	+25 05	Fe/ND	13-13-1

Spectr. Temp. +4°F ..... Dome Temp./Hum. −4°F / 70% Transparency Conditions Sl. hazy - cloudy ... snow.

Focus 518

Spectr. Temp. −6°F ..... Dome Temp./Hum. −20°F / 80%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
80/120	>6"	5·3	KO IV	BC	830/.68	BS	IIa-0-e	A	Waterloo	v	s/str
200/160	"	6·4	A&F	"	"	"	"	B	"		s/str
							"				
200/		6·3	F3 IV	BC	830/.68	BS	"	A	Waterloo	cloudc snow	
				BC	830/.68	BS	IIaO	A	T=+1°F	Se+518	OK
400/180	8"	7·18	A3	"	"	"	IIa-0-e	A	Waterloo	T=0°F	V s/uk

79 pg #1

Date ..Wed.-Thurs. Jan 7-8/81 Observers ..T.n...W.h./..T.q.....

Emulsion Batches:
..IIa0-e..13050 - 31.120
..IIa-p-e.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45401F	Focus Test					2 30W	+50°		
45401	HD 222368	23 348	+5 05	17 46	17 58	1 10 W	+5 37		
45402	HD 212943	22h 22m.8	+4° 36'	18h 25	18h 36	3 08 W			
45403	HD 212943	22h 22m.8	+4° 36'	18h 44m	18h 52m	3h 24m W	+4° 40'		
45404F	Focus Test	—	—						
45404	HD 4004	0h 37m.5	+64° 14'	19 42	20h 25m	2h 40 W	+64 45 7		
45405F	Focus Test	—							
45405	HD 9974	1h 32m.4	+57° 39'	21h 26m	22 55	4h 08 W	+55° 10.7		
45405T	Spot Calc for 45404 - 06			15min @ 7V: D2		5350, 4850, 5810			
45406F	Focus Test	—	—						
45406	HD 17638	2h 44.8	+56° 31'	23h 13m	00 25	4 37 W	+56 55		
45407	HD 88821/2	10 03.8	+20 49	00 52	02 29	0 46 E	+20 30	Fel-	3-3-3
45407T	Spot Calc for 45401, 45407 - 11			15m - @ 15V		D4 3900	D3 4310	D2 ND	
45408	HD 97991	11 11.1	-2 55	02 36	04 52	0 31 W	-3 17	Fel-	3-3-3
45409	HD 112028	12 483	+83 58	05 02	05 21	0 34 E		fel-	5-5

Spectr. Temp. +18°F Dome Temp./Hum. 4°F/78% Transparency Conditions Sl. hazy 8C

Focus 513

Spectr. Temp. .... Dome Temp./Hum. ..../....

Some aurorual activity in north (wh)

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				EC	830/58	BS	IIaD	B			sl cen red
40/31	5-8"	4.6	F7V	"	"	"	5-2E	B	std vel		sl wk
400/79	"	5.9	KO III-II	"	150/.5	RS	098-02E	B	Std Vel.	slit/slicer V filt Spectrot. "	fine
400/75		5.9	KO III-II	"	150/.5	150/.9	098	A	" "		fine
		1.		JT EC	"	150/.5	IIaD	1			
400/30?		10.5	WN.	"	"	150/.5	"	2	Wln-WR.	Fe or No too strong	strong
				"	"	"	"	1			
800	bad	10.7	WN	"	"	150/.5	IIaD	2	wln WR		ok
					"	"	"	1			
800	bad	11.0	WC6	"	"	"	"	2	Wln-WR		ok
400/304	5"	7.20	9GS +A2	EC	830/.68	BS	IIaD-E	A	V E Bln	Set 517 maybe Spectrot'g	ok
							"				
400/310	5"	7.18	F2V	EC	830/.68	BS	"	B	Runaway		fine
200/150	3"	5.18	F8	"	"	"	"	A	Std-Bln	Emiss	fine

81 Pg #2

Emulsion Batches:

Date Jan. 7-8 Observers

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45410	HD 112014	12 48.3	+83 58	05 23	05 52	00 03 E	+8	Fe/-	5-5
45411	HD 111456	12 44.3	+60 52	05 58	06 33	00 40 W	"	"	3-3-3

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 2

Focus 517

Spectr. Temp. +1°F ..... Dome Temp./Hum. -8°F / 87%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/150	3"	5:8	A0	BC	830/68	BS	IIaDe	B	because it's there		fine
200/185	3-4"	6:81	F5V	"	"	"	"	A	UMa Tmr		fine

IIaDe dev Jan 9 D19 7min @ 68°F BH

IIaDe dev Jan 9 D19 5min @ 68°F BH

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Fri-Sat

Date Jan. 9-10. 181 Observers Jn

Emulsion Batches:
IIa0-c 13050 -31120
17 18 0

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Ex
45412	HD 44172	06 15.3	+14 45	01 45	03 30	4 12 W	+14 46	Fe/—	4-4
45412T ✓	Spot Calib for	45412-	14		15min@15V	D4 3900	D3 5950	D2 4200	
45413	HD 103095	11 47.2	+38 26	03 35	05 00	0 10 W	+37 54	Fe/—	4-4-1
45414	HD 115043A	13 09.5	+57 14	05 06	07 01	0 50 W	+56 49	"	4-4
45414F	Focus Test							Fe/—	4-4

Spectr. Temp. ..+18°F..... Dome Temp./Hum. +12°F / 93% Transparency Conditions ..Sl. haze..... 84

Focus ....5.13 - 5.15.....

Spectr. Temp. ..+8.5°F..... Dome Temp./Hum. -3°F / 90%.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/306	3"6"	7.29	B6V	BC	830/1.68	BS	IIa-0-e	A	Runaway		fine
							IIa-0-e				
200/180	5"	✓ 6.45	G8VJ	BC	830/1.68	BS	"	B	Hamp Sp Std	B-7.27 kK	fine
200/180	4"	7.42	G1V	"	"	"	"	A	4Mo-Tar	T=12°F Set 515	fine
				"	"	"	"	B	Set 515 T= +8.5°F		OK
	Finder Det Jan 12 DA 7min @ 62°F Us										

.

85

Sat - Sun

Date JAN. 10-11. 81 ..... Observers ... B.K.-T.n. .....

Emulsion Batches:
IIa-O-C. 13050 - 07011
.....
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45415F	Focus Test							Fe/—	14-14
45415	HD 222368	23 34·8	05 05	17 31	17 40	1 05W	+5 30	Fe/—	6 6
45416	HD 218634	23 04 5	+8 04	17 44	18 14	2 12W	+4 31	"	4-4-4
45417	+10 7864	1 13·2	+39 25	18 25	22 12	3 59W	+39 48	"	4-4-4
45417T ✓	Spot Calib for 45415-19.			15 min	~ 5V	D4 3 40	D3 ~~5 45~~ 0	D2 48·0	
45418	HD 258693	4 01·0	+37 49	22 20	01 17	4 32W	+37 58	Fe/—	4-4-4
45419	HD 71603	8 23·5	-2 11	1 24	3 10	1 46W	-2 28	"	4-4-4

Spectr. Temp. +9°F ..... Dome Temp./Hum. +1°F/71%. Transparency Conditions ... Fine ... slhaze ... 86

Focus ..... 516 .....

Spectr. Temp. -3°F ..... Dome Temp./Hum. 10F/90%.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/168	BS	IIaO	A		cont used	
40/40	3"	4.6	F7V	"	"	"	IIaOe	A	std vel		fine
40/70	3"	6.6	M2III	"	"	"	"	B	Wat Prog		slwk
400/360	3-5"	8.5	K0III	"	"	"	"	A	"		slwk
							"				
400/312	3"	7.9	G5	BC	830/168	BS	"	B	Wat Prog	Set 519 T= +1°F thin cloud	slwk
400/240	3"	6.6	F0	"	"	"	"	A	"		fine
										Clouds	
	IIaOe	Des Jun 12		D19	7min	@ 68°F					

87 #1

Date 11/12 JAN 1981 SUN/MON Observers Bla-Tn / Tn

Emulsion Batches:
IIa-O: 13050 - 07011
IIa-E: 07119 - 07011
IIIa-E: 07119 - 15120

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45420F	Focus Test							Fe/-	H-14
45420	HD 200120	20 56.1	+91° 08'	17 33	17 42	03 52W	+17° 32'	Fe/-	4-4
45421	HD 200120	20 56.1	+91° 08'	17 51	18 32	01 43W	"	Fe/-	4-4
45422	HD 5394	00 50.7	+60° 11'	18 39	18 43	00 35W	+60° 42'	Fe/-	12
45422T	Spot Calc for	45420,23	24,30		15 min @ 15V	D4 3400	D3 4300	Fe/-	
45423	HD 20902	03 17.2	+49° 30'	18 52	19 00	01 15E	+49° 52'	Fe/-	12
45424	HD 19356	03 01.7	+40 34	19 06	19 13	00 45E	+40° 57'	Fe/-	12
45425	HD 5394	00 50.7	+60° 11'	19 23	19 30	01 42W	+60° 42'	Fe/-	2
45426	HD 41335	05 59.4	-6° 42'	19 47	21 30	01 24E	-6° 38'	Fe/- N-/-	4-4 12-12
45426T1	Spot Calc	For 45421,22,26			15 min @ 15V	D3 7V 4810	D1 7V 5450		
45426T2	Spot Calc	for 45425,27-29			15 min @ 04	17V 15V 3900	11V 4300	*	
45427	HD 41335	05 59.4	-6° 42	21 38	21 44	00 11E	-6° 38	Fe/-	12-12
45428	HD 33378	05 04.4	-0° 53'	22 48	23 12	01 14W	-8 42	Fe/-	12-12-12
45429	HD 37146B	05 33.7	-2° 39'	23 18	23 35	01 05W		"	12-12-12
45430	HD 42112	06 09.5	+13° 53'	23 42	23 52	00 17W	+13° 52'	"	6-6

Spectr. Temp. +3°F ..... Dome Temp./Hum. -9°F/74% Transparency Conditions . Fine 88

Focus . 2.19 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... /

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/68	BS	IIa-0	A			cal Rel
40/30	4-5	4.51	B1e	BC	830/68	BS	IIa-0E	B	Be-Bln		fine
30/30	3"	4.71	B1e	BC	1200/.7	15%/7	09-02E	A	Be-Bln	F=513 T=-2°F	sl wk
30/30	3"	2.47	B0e	BC	1200/.7	15%/7	09-02E	B	Be-Bln		sl wk
							IIa-J-E				
40/240	3	2.27	F1b	BC	1200/.6	1200/.7	IIa-0E	A	Test-Bln		
40/130		2.2 3.3	B3V	BC	1200/.6	12%/7	IIa-0E	B	Test-Bln		
40/200		2.43	B5e	BC	1200/.7	BS	IIa-JE	A	Be-Bln		Fe 1 wk sl wk
200/500	4"	5.16	B2e	BC	1200/.7	12%/7	09B-02E	B	Be-Bln	T=0° T.H ≈ 03?	v wk sl fine
							09-02E				
no 4810 exp due to							IIIa-JE			T=-2°F F=500	
240/120	2-4"	5.16	B2e	BC	830/68	BS	IIa-JE	A	Be-Bln		fine
40/161	3"	4.07	B2Ve	BC	830/68	BS	IIIa-JE	B	Be-Bln		fine
40/169		3.51	09.5V	"	"	"	"	A	SB-Bln	T -2°F	fine
80/60	2"	5.67	B1V	BC	830/68	BS	IIa-0E	B	P unaway +		fine

OVER →

89 #2

Date ..... Observers ..Tn.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45431	HD 44172	06 15.3	+14 45	23 58	01 01	01 50 W	+14 46	Fe/-	1.1.4
45432	HD 52533	06 56.5	-2 59	01 08	03 01	03 11 W	-3 02	Fe/-	4.4.4

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 9.0

Focus ..... 520 .....

Spectr. Temp. -5°F ..... Dome Temp./Hum. ~~-2°F~~ / 90%.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/305	3"	7.29	B6V	BC	830/68	BS	IIaD-e	A	Runaway		Fair
400/	2-3"	7.61	09V	BC	830/68	BS	IIaD-e	B	Runaway	thin cloud Thicker cloud. Snow too	Fair
	IIaD-e	Dev	Jan 12	D19	7 min	@ 68°F		B1s			
D Base	IIaD-e			"	5 min		"				

91

Date 17/18 JAN 1981 SAT/SUN Observers B.M.-R.

Emulsion Batches: IIa-E 13030 ~ 110 16 194

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45433F	Focus Test							Fe/-	14-14
45433	HD 222368	23 39.8	+5 05	17:37	17:14	01 36W	+5° 35'	Fe/-	4-4-4
45434	HD 220057	~~23 15.7~~ 23 19.2	~~+60 36~~ +61 03	17:52	18:34	02" 46W	+61° 05'	Fe/-	4-4-4
45435	HD 3950	00 37.0	+51° 48	18:40	19:22	02" 13W	+52° 15	Fe/-	4-4-4
45435T ✓	spot cal for plates	45433-37			15min @ 15 Volts			D4 3900 D3 4300 D2 4710	
45436	HD 11606	01 48.8	+58° 47	19:27	20:12	01" 50W	+59° 12	Fe/-	4-4-4
45437	HD 12323	01 55.8	+55° 08	20:17	22 56	04 26	+55° 32	Fe/-	4-4-4

Spectr. Temp. 18°F ..... Dome Temp./Hum. 11°F/65% .. Transparency Conditions 92

Focus .....5.13.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	IIa-OE	A		T=18°F F=5.13	
40/40	3	4.16	F7V	BC	830/.68	BS	IIa-OE	B	Std. Vel		fine
400/350	2-3	6.94	B2IV	BC	830/.68	BS	IIa-OE	A	Runaway *		fine
400/350		7.05	B0	B.C.	830/.68	BS	IIa-OE	B	Runaway *		fine
							IIa-OE				
400/350		7.08	B2IVne	B.C.	830/.68	B.S.	IIaO-E	A	Runaway *		
400/228		8.88	O9V	B.C.	830/.68	B.S.	IIaO-E	B	S.B. - Bin	T=16°F Cloud	wisp
IIaOe	Dan Jan 19				019 @ 68°F - Blc						

93

Mon - Two

Date Jan. 19-20 1981 Observers Ly-R.

7" 68ϕ – Emulsion Batches: Tri-X: E 3052 – 11011

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45438F	Focus					~00° 12E	+60 55		17-17
45438	HD 10260	01 35.3	+60 32	17:54	18:32	00 30 W	+61 00	Fe/-	4-4-4
45439	HD 1337	0 12.4	+50 53	18:37	19:04	02 25W	+51°22	Fe/-	4-4-4
45440	HD 1337	"	"	19:04	19:31	02 53W	"	Fe/-	4 4-4
45441	HD 17856	02 47.0	+68 35	19:40	21:50	02 35W	+60 57	Fe/-	4-4-4
45441T ✓	spectra plate 45438-42						15mm@15Volts D4 3900 D3 4300 D2 4810		
45442	HD27989	04 20.0	+18 39	21:54	23:33	02 47W	+18 54	Fe/-	4-4-
45442F	focus test					02 47W	+1854	Fe/-	14-14
	exposure meter test	40/42.5							

Spectr. Temp. 32°F Dome Temp./Hum. -03°C 70% Transparency Conditions frosty 9/4
Focus 506 94% inside
Spectr. Temp. 28°F Dome Temp./Hum. -07°C 100%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/-.025	BS	IIaO-E	A		T=32 F=506	cant start
200/240	2-3	5.5	B8	BC	1200/-.025	BS	IIaO-E	B	Sp Bin - Ly		fine
200/240	"	6.05	O5III	BC	1200/-.025	BS	IIaO-E	A	MsB - Ly		fine
200/240	"	"	"	"	"	"	"	B	MSB - Ly		fine
500/500	2-3	9.0	A0In	BC	830/.675	BS	IIaO-E	A	SU CAs - Tnr	T=30°F F=510	sl wk
							IIaO-E				
300/300	3"	8.2	G6V	BC	830/675	BS	IIaO-E	B	Hyades - Tnr		fine 2nd T
				BC	83/675	BS	IIaO-E	A		T=28°F	OK

95 Two-sided

Date Jan 20-21, 1988 Observers Kent Ri

7" 68

Emulsion Batches:
IIaD-E 13050-11011
IIaD-E 13050-17011

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45443F	Focus Test							F/-	4-14
45443	HD 222368	23 34.8	+5° 05	17:45	17:53	01h 58W	+05° 37	F/-	6-6
45444	HD 203152=HR 8177	21h 15.9	+31° 49	17:58	18:35	04 50W	+36 43	F/-	9-4-4
45445	HD 17463=SU Cas	02 43.0	+68° 48	18:31	19:23	00 17W	+68° 52'	F/-	4-4-
45445T ✓	spectral b plate	45443			15mm @ 13 Volts		04 3900	D3	D2
45446	HD 20902=α Per	3h 17.2	+49° 30	19 27	19:29	00 10E	+49° 49	F/-	6-6
45447	HD 16901=19 Per	2h 37.6	+43 52	19° 33	19 56	00 37N	+44 1	F/-	6-6
45447T ✓	spectral cal for plates	45444 -			15mm @ 15 Volts		04 3900	D3	D2
45448	HD 23230=γ Per	3h 53.9	+42° 16	19 59	20 05	00 05W	+42 34	F/-	6-6
45449	HD 27360=SE Tau	4h 31.4	+12° 20	20 10	21 45	00 56W	+13° 34	F/-	4-4-4
45450	HD 49966=T Mon	6h 17.8	+07° 08	21 52	23:04	00° 25W	+07 11	F/-	4-4-4
45451	HD 40912=RT Aur	5h 42.1	+30° 33	23 09	23:52	01 10W	+30 35	F/-	4-4-4
45452	HD 46575=W Gem	6h 27.2	+15° 24	23 57	03 32	04 52W	+15° 24	F/-	4-4-4
45452F	Focus test							F/-	14-14

Spectr. Temp. 38°F ..... Dome Temp./Hum. -05°C 70% Transparency Conditions ... Good 96

Focus ..... 509 .....

Spectr. Temp. ..... Dome Temp./Hum. -10°C 100%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				3C	830/	3S	IIaE*			T=32 F 509	OK
40/40		4.6	F7E	"	"	"	" *	B	std vel		Fe str str
40°/40		5.1	F2	"	"	"	IIaO-E	A	Cyph/Evno		fine
40/40		7.0	F7E	"	"	"	"	B	Bin Cyph/Evno		v str
							IIaO-E*			& IIIaJ Box	
2'/40		2.27	F5E	"	"	"	IIaO-E	A	Bin Cyph/Evno		Fe str str
35/			G0E	"	"	"	"	B	Bin Cyph/Evno		v sl str.
							IIaO-E				
25/50		4.2	F5E	"	"	"	"	A	Bin Cyph/Evno	T=29	strong
40/330		~7.2	~F5E	"	"	"	"	B	Bin Cyph/Evno		sl strong
/500		~6.7	~F5E	"	"	"	"	A	Bin Cyph/Evno		sl strong
40/400		~6.2	~G0E	"	"	"	"	B	Bin Cyph/Evno	T=26 F Evno 511	strong
40/642		~7.6	~F5E	"	"	"	"	A	Bin Cyph/Evno		v.sl. strong sl. flexor-fovea?
				"	"	"	"	B		T=24°	cont sl rvd
									frost forming on the inside of the		
										comparison slightly strong on all	

97 WED-THURS

Date Jan. 21-22/1981 Observers Ly-Tn

Emulsion Batches: IIaO-e 13050 - 17011

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45453F	focus					00 07E	+60 59	Fe/—	14-14
45453	HD 10260	01 35.3	+60 32	17:53	18 29	00 35W	+60 59	Fe/-	4-4
45454	HD 1337	00 12.4	+50 53	18 33	19 32	03 02W	+51 21	Fe/-	4.4-4
45454T	Spot Cal	Sr 05433			15min@15V	04 3400	03 4300	9810	

Spectr. Temp. 26°F ..... Dome Temp./Hum. 22°F/98% in 80% out Transparency Conditions ... Cirrus 98

Focus ..... 508 .....

Spectr. Temp. ..... Dome Temp./Hum. ...../.....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/-.025	BS	IIaOe	B		26°F 508	Cent Red
40/48	2	5.6	B8	BC	1200/-.025	BS	IIaOe	A	Sp Bin-Ly		Fair
40/51	1-2	6.0	09	"	"	"	"	B	MSB-Ly	Cloud use 400x for last 40/8 counts	Fair
							"				

99 THURS - FRI

Date JAN 22-23 /1981 Observers Grs - Th

Emulsion Batches: IIaO-c 13050-17011 21 213

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
45455	HD 97991	11h 11.1m	-2° 55'	03:20	04:25	1h 05m W	-5° 11'	Fe/ND	[illegible]
45455	Spot Calib for 45455			15 min	6 EV	D4 3900	D3 4300	D2 4510	

Spectr. Temp. 31°F Dome Temp./Hum. 25°F/98% Transparency Conditions Cloud 100

Focus 50.9

Spectr. Temp. 31°F Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
41/117	4"	7.18	B~~2~~	BC	830/.68	BS	IIaOe	A	Runaway *	31°F (cut short) 509	
							11			Cloud.	

101

9

9m 65

Emulsion Batches: IIa0-e 13050 -17011 19A

Date TUES/WED., JAN. 27/28. 1981 Observers ...Tnr.-Tn.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Ex
45456	HD 12929	02 01.5	+22 59	18 07	18 10	0 14W		Fe/—	5-5
45456F1	Focus Tests	(Hours)	A & B Tests of Plate holder diffs			0 22W	+42°	Fe/—	15-15
F2	"	"	"			"	+42°	"	"
45457	HD 16893	02 37.4	+67 23	18 56	20 57	2 23 W	+67 49.2	Fe/—	4-4
45457F1	G16 Focus Tests, checking possible		variation of focus			0 0	+14°	Fe/—	18-18
F2	with East-west posn of grating in		brackets.			"	"	"	"
F3						"	"	"	"
F4						"	"	"	"
F5	G8 Focus Tests - At this tilt, grating (unclamped) cannot move					"	"	Fe/—	14-14
F6	East-west very much.					"	"	"	"
45457F7	Spot Calib for 45456 -			15 min @ 15V		D4 3900	D3 4300	D2 4800	

Spectr. Temp. +35°F ..... Dome Temp./Hum. +25°F / 88% Transparency Conditions ... poor 1.02

Focus .. 507 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... / .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/40	4"	2.2	K2IIIa-J	BC	830/.68	BS	IIIa-O-e	A	stdvel		v sl str
				"	"	"	IIaO	A		T=33.5°F	
				"	"	"	"	B		T=33.5°F	
30/70	4"-6"	8.92	A2V	BC	830/.68	BS	IIaO-e	B	Thr SU CaO Assoc. clouds Set 507 ~~Hyact Bin~~	Push please	wk
				"	1200/.67	"	098o2e	A	T=27.5°F Set 507	Grating far East }	
				"	"	"	"	B	" "	in brackets. }	
				"	"	"	"	A	"	Grating West in brackets }	
				"	"	"	"	B	"	} strong	
				"	1200/-.025	"	IIaO	A	"	Full East in brackets	
				"	"	"	"	B	"	"	
							IIIaO-e				
							exposed	098	closed by [illegible] from exposed IIaO		

103

Date Thurs. Fri. Jan. 29-30. 198 Observers Jar-R.

Emulsion Batches:
IIaO-E 13050-20011

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45458F	Focus test							Fe/—	14-14
45458	HD 22484	03 31.8	+0 05	18 03	18 20	0 57 E	+0 19.9	Fe/—	4-4
45459	HD 27808	04 18.3	+21 30	18 26	23 04*	3 02 W*	+21 41.8	Fe/—	4-8
45459T	spectral tri plates	45458-				15min@15U	D4 3900	D3 4300	D2 4800
45460	HD 30869	04 46.2	+13 29	23 09	01 01	4 30 W	+13 37.3	Fe/—	4-4
45461	HD 47129	06 32.0	+6 13	01 05	02 24	4 07 W	+06 10.0	Fe/—	4-4-4
45462	HD 109011	12 26.5	+55 40	02 33	06 17	2 07 W	+55° 12.4	Fe/—	4-4-4
45462F	Focus test							Fe/—	14-14

Spectr. Temp. 26°F Dome Temp./Hum. -10°C 70% Transparency Conditions specified except for 1/4 two hours at beginning of the night because of snow

Focus 508

Spectr. Temp. ..... Dome Temp./Hum. -15°C 97%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					1200/-.025	B.S.	IIaO-E	B		T26°F F508	
40/55		4.4	F8 V	BC	1200/-.025	BS	IIaO-e	A	Std. Vel.	ARC NOT FIRING PROPERLY	
400/550	2"	7.7	F7 V	"	"	"	"	B	Tnr-Hyades Std.	SNOW, STOP AT 1952 * RESTART 2152	
							IIaO-E			R	
200/253	1-2"	6.8	F7 V	"	"	"	"	A	Tnr-Hyad. Bin.	T22°F tele limit	
200/230	2"	6.08	08 III	"	"	"	"	B	Ly.-Plaskett's Star	" "	
300/700	1-2"	9.06	K2 II	BC	830/.68	BS	IIaO-e	A	Tnr-UMa	T17°F 512	
				"	"	B.S	IIaO	B		T19°F 512	
										snow & clouds	

105

Fri · Sat

Date Jan. 30-31./.81.. Observers ..Tw..T.m.....

7½" 68° Emulsion Batches: ...Ilford 13950-20011

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45463F	Focus TEST					0^h	+23°	Fe/—	1m 4
45463	HD 12929	02 01.5	+22 59	17 54	17 56	0 13 W	+23 27.3	Fe/—	5-5
45464	HD 17856	02 47.0	+68 35	18 18	21 25	2 54 W	+68 58.1	Fe/—	3-3-3
45464F ✓	Spot Calib	For 45463-70			15 min @ 15V	D4 3900	D3 4300	D2 4810	
45465	HD 27383	04 14.2	+16 18	21 31	23 12	3 17 W	+16 33.6	Fe/—	4-4-4
45466	HD 28911	04 28.2	+13 02	23 15	00 29	4 19 W	+13 18	Fe/—	4-4-4
45467	HD 48434	06 38.4	+04 02	00 32	01 00	2 41 W	+04 04.2	Fe/—	4-4-4
45468	HD 52533	06 56.5	-2 59	01 03	02 13	3 36W	-2 59	"	4-4-4
45469	HD 88021/2	10 03.8	+20 49	02 17	03 41	1 57W	+20 32	"	4-4-4
45470	HD 97991	11 11.1	-2 55	03 44	05 02	2 11W	-3 17	"	4-4-4

Spectr. Temp. +18°F ..... Dome Temp./Hum. +12°F / 70% ..... Transparency Conditions .. Fine 106

Focus ... 512 - 513 .....

Spectr. Temp. 46 °F ..... Dome Temp./Hum. 40°F / 100% +

Good meteor shower (slows brt)
δ Leonids ?

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/0.68	BS	IIaO-2	A		T 18°F FS12	
40/38	2"	2.2	K2 III	"	"	"	"	B	Std. Vel		v sl str
400/280	2-3"	9.0	A0 V	"	"	"	"	A	Thr/Rm Su Cas		fine
							"				
100/180	3-4"	7.44	F8 V	BC	830/.68	BS	"	B	Thr Hyades Bin	T-16°F	v sl str
200/180	3"	7.05	F5 V	BC	830/.68	BS	"	A	Thr Hyad Bin	T=+15° Set 513	v sl str
200/170	2-3"	5.9	B0 III	BC	830/.68	BS	"	B	Thr. Orion.		v sl str
200/50	3-8"	7.61	O9 V	"	"	BS	"	A	Runaway	haze - bad bad	sl weak
300/300	2-1"	7.20	gG5+ A2	"	"	"	"	B	VF Bin		strong
200/180	2"	7.18	B2 V	"	"	"	"	A	Runaway	setting frost	sl str.

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Date Sat / Sun Jan. 31 / Feb. 1, 1981 Observers ...GIS - Ri.....

7½ᵐ 68° Emulsion Batches: IIaO-e 13050-29011 IIa 209

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45471F	FOCUS TEST					0ʰ	+24	Fe/—	14-14
45471	HD 3712	0ʰ 34ᵐ.8	+55° 59′	18:00	18:01	1ʰ 48ᵐ W	+56° 27′	Fe/—	6-6
45472	HD 4142	0ʰ 38ᵐ.9	+47° 19′	18:05	18:15	1ʰ 59ᵐ W	+47° 46′	Fe/—	4-4-4
45473	HD 11606	1 48.8	+58 47	18:21	18:55	1ʰ 27ᵐ W	+59° 10	Fe/—	4-4-4
45474	HD 14220	2 12.8	+52 07	18:59	19:52	2ʰ 01 W	+52° 28′	Fe/—	4-4-4
45474T	spectral b[illegible]	45471-				15 min @ 150 cm	D4 3900	D3 4300	D2 4510
45475	HD 24866	4 37.3	+40° 36′	19:57	20:20	0ʰ 05ᵐ W	+40° 46′	Fe/—	4-4-4
45476	HD 34078	5 09.7	+34° 12′	20:24	20:47	0ʰ 01ᵐ E	+34 17′	Fe/—	4-4-4
45477	HD 36576	5 27.7	+18° 28′	20:51	21:09	0ʰ 04ᵐ W	+8° 33′	Fe/—	4-4-4
45478	HD 37657	5 35.1	+43° 00′	21:13	22:28	1ʰ 15ᵐ W	+43° 03	Fe/—	4-4-4
45479	HD 43112	6 09.5	+13° 53′	22:32	23:25	1ʰ 40ᵐ W	+13° 52	Fe/—	4-4-4
45480	HD 45995	6 25.6	+11° 19′	23:29	00:07	2ʰ 05ᵐ W	+11° 16′	Fe/—	4-4-4
	~~HD 44172~~	~~6 15.3~~	~~+14° 45′~~			W	+14° 55′	Fe/—	4-4
45481	HD 97991	11 11.1	-2° 55′	00:23	02:12	0ʰ 35ᵐ E	-3° 21′	Fe/—	4-4-4
45481T1	uv test							Fe/UV	90m
45481T2	uv test							Fe/UV	90m

Spectr. Temp. +25°F ..... Dome Temp./Hum. +23°F / 60% Transparency Conditions . Good at first then the 103 haze slowly getting thicker

Focus ... 510 .....

Spectr. Temp. +24°F ..... Dome Temp./Hum. +17°F / 100% * short plates developed = broken plate

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/068	BS	IIaO-e	B		T=25°F F=510	v sl red
40/40	2"	2.5	kO IIIa	"	"	"	"	A	Std Velocity		v sl strong
200/175		5.53	B5 V	"	"	"	"	B	Runaway *		strong
200/175		7.02	B2 Vne	"	"	"	"	A	Runaway *		sl strong
400/250 200/175		7.01	B2 V	"	"	"	"	B	Runaway *	hazy moving in from SW T= 75 Runaway # 250	
							IIaO-E				
200/175		5.87	B8 IVn	"	"	"	"	A	Runaway *	T=26°F	strong
400/385		6.12	O9.5 V	"	"	"	"	B	Runaway *		
200/175	1-2	5.71	B2 IIIe	"	"	"		A	Runaway *		
400/350		7.22	B3 Vne	"	"	"	"	B	Runaway *	*	sl str
400/353		5.67	B1 V	"	"	"	"	A	Runaway *	T=25°F *	sl str
400/350		6.04	B2 Vnn	"	"	"	"	B	Runaway *		
400/		7.39	B0 V	"	"	"	"	A	Runaway *	T=24°F	
200/470		7.12	B2 V	"	"	"	"	A	Runaway *	haze - cut short *	sl str
				"	230/950	150u	"	A	uv test	with lens at plate only maximum tilt	
				"	1200/600	150u	"	B	"	with lens at plate in	

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Mon-Tues

Date Feb 2-3 1911 Observers Rm-Bts

7½" 60v

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
4544 F	Focus Test							K/-	14-4
4545	HD 29260 S2 Tau	04h 31.9	-18° 20'	19h 09	23 04	03 05W	+15° 32	K/-	4-4
4546 OT		4544 -		15 min E	15v D4 3900	D3 4300	D2 4810		
4547	HD 46595 W Gem	06h 29.2	+15° 24	23h 16	02 63	04 06W	+15 22	K/-	4-4-4
4548	HD 102647 3 Vir	11h 44.0	+15° 8	02 30	02 54	00 32E	+14 +2	K/-	4-4-4
4549	HD 111111	11h 11.1	-2° 55	03 21	06 01	03 24W	-3° 10	K/-	4-4-4
4550	HD 136202	15h 14.2	2° 09	06 32	06 45	00 05W	1 53.9	K/-	4-4

Spectr.

Focus

Spectr.

Exp. Min

Spectr. Temp. 30°F Dome Temp./Hum. 17°F Transparency Conditions 1/10

Focus 509

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	IIaO	B			v sl recl
4-7/600		~7.5	FS1b FS5b	"	"	"	"	A	Bin. Cyg/Evans	Intermittent fog	v sl str. Hg lines
										shallowed in darkroom	
400/517		~7.3	F6	"	"	"	"	B	Bin Cyg/Evans		v sl str Hg lines
40/310		2.3	A5II	"	830/.97	55μ	"	A	UV test	17° F	strong comp. uneven
40/350	3	7.18	B2.5	"	830/.68	BS	"	B	R Elm	darker not readjusted for this one	v sl str Hg lines
40"/200			F1a	"				A	Std Jel	darker adjusted	fine

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Date Feb 4/5 81 WED/THURS Observers Ly-Ri/Gu-Ri

7½" 68 Emulsion Batches: IIaD E 13050 : 31011 ... 17
9" 68 HIE .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45487	HD10260	01 35.3	+60 32	18:27	20:29	3 33W	+60 57	Fe/-	4-4-4
45488	HD28226	04 22.1	+21 24	20:36	21:34	1 52W	+21 38	Fe/-	4.4.4
45489	HD28406	04 23.7	+17 39	21:38	23:51	4 03W	+17 51	Fe/-	4-4-4
45489T	spectral tri plate	45487-90				15min @ 15Volts D4 3900		D3 4300	D2 4810
45489F	focus test					4 03W	+17 51	Fe/-	14-14
45490	HD 81797	09 22.7	-08 14	00:04	00:09	0 37E	-08 31	Fe/-	6-
45491	HD 52973	06 58.2	+20 43	00:30	02:27	4 09W	+20°37	Ne/-	[illegible]
45491T	first calib ~ 9 hrs	plates 45491-94				D4 10m D3 [illegible] @ 7½V	7680	[illegible]	
45492	HD 8890A	01 22.4	+88°46	03:06	03:47	10 31W	+89°12	Ne/-	30-30-
45493	HD 8890A	01 22.4	+88°46	03.51	04:29	11 13W	+89°12	Ne/-	30-30-30
45494	HD [illegible]	22 25.5	+57 54	04 50	05 43	3 00E	+58 12	Ne/-	30-30-
45494T	UV test							Fe/-	360
45494F	focus test							Ne/-	14 14

Spectr. Focus. Spectr. Exp. Mtr

Spectr. Temp. ..T.14°F..... Dome Temp./Hum. ..0.F...170% Transparency Conditions ..good.....1.12

Focus .....509..... -16°C

Spectr. Temp. ..... Dome Temp./Hum. ..-22°C..180%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/480	4-5	5 6	F8	BC	1200/-.025	BS	IIaOe	A	Sp Bin -Ly		fine comp wks
400/480	3-4	60	Am	"	"	"	"	B	Sp Bin -Tur	8°F 510	fine
400/305	3	7.4	F6V	"	"	"	"	A	Hyades Std -Tur	6°F 510	good
							IIaOe				
				BC	1200/-.025	BS	IIaO-e	B		2°F 510	sl blue
20/27	3	22	K3II	"	"	"	"	A	Std Vel.		fine
/500	4	3.9	sp	"	830/.9	150μ/.5	HIE	B	IR CEPH	T-1°F 518 baked "V" FILTER strip	weak
40/250	4	2.0	F8Ib	BC	830/.9	150/.5	HIE	A	IR CEPH	* Filter turned at end of exposure baked strip	weak
40/250	4	"	"	"	"	"	"	B	"	* Filter wheel turned during baked strip exposure	weak
0/113	4	3.9	sp	"	"	"	"	A	"	baked strip	v. weak
				BC	830/.9	150	IIaOE	A		terminated by clouds at T	
				BC	830/.65	150/5	IIaOE	B		6 4/5 T-03°F	
										* take reversed 518	

arison Exp

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Date Feb 7 81 Sat Observers Ri

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45494T2	UV Test							Fe/Ne/—	30
45494T3	"							Fe/Ne/—	90
45494T4	"							Fe/Ne/—	90
45494T5	"							Fe/Ne/—	30

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 114

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30				B.C.	830/.950	150	IIaO-E	A		T 30°F 509	
30				B.C	830/.950	150	IIaO-E	B		" "	
90				B.C.	1200/.600	150	IIaO-E	A		T 30°F 504	
90				B.C.	1200/.600	150	IIaO-E	B		" "	

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Monday
Date February 9, 1981 Observers GIS - RI

7½" 69° Emulsion Batches: IIa-O-e 29070-09021

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45495	HD 97991	11h 11.m1	-2° 55'	03:07	05:21	03h 06m W	-03°17	F/—	4-4-
45495T	spot cal for plate 45495-					15 min @ 15 Volts	D4 3900	D3 4300	D2 4810
45496	HD 188439	19h 50.m1	+47° 33'	05:29	06:31	04h 20m E	+47°50'	R/—	4-4-4
45497	HD 136202	15h 14.m2	+ 2° 09'	06:36	06:50	00h 31m W	+ 1° 54'	Fe/—	4-8
45497F	focus test							Fe/—	14-14

Spectr. Temp. 25°F Dome Temp./Hum. +18°F/85% Transparency Conditions 1.6

Focus 510

Spectr. Temp. 20°F Dome Temp./Hum. +12°F/89%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
510/350	3-4	7.18	B2V	BC	830/.68	BS	IIaO-e	A	Runaway *	T= 25°F F-510	fine
							IIaO-E				
500/350		6.18	Bo.5IIIp	"	"	"	"	B	Runaway *		v sl sn
510/16		5.6	F8IV-V	"	"	"	"	A	Std. Velocity.	cut short	good
				"	"	"	"	B		clouds T = 20°F F = 510	

117 Mon-Tues

Date Feb 9-10 1981 Observers Rm-Ri // Ly-Ri 8m 68s

Emulsion Batches:
IIa-E 29070-0202.1 ... 20 207
IIa-E* 29070-0704.1 ... 20 199

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45498	HD 19662 = HR 690	2h 16.9	+54° 55	20:07	21:37	4h 15W	+55° 7	Fe/—	4-44
45498T	Spectral plate	45498 —	45500	15 min @ 15 volts		D4 3100 D3 4300	D2 4910		
45499	HD 23230 = ν Per	3h 38.4	+42° 16	21:40	21:50	3h 10W	+42° 35	i/—	4-44
45500	HD 30232 = AW Per	4h 41.1	+36° 33	21:54	23:57	4h 15W	+36° 46	—/—	44-4
45501	HD 48434	6 38.4	+04 02	00:08	01:24	3 45W	+4 02	Fe/—	4-44
45502	HD 98547	11 15.2	+17 52	01 30	03 50	1 33W	+17 30	i—/—	4-44
45502T	spectral for plate	45501 —			15mm @ 15 Volts	D4 3900	D3 4300	D2 4810	
45502F	forces					1 34W	+17 30		44-44

Spectr. Temp. 25°F Dome Temp./Hum. 18°F / 85% Transparency Conditions ..Rain.....1.18.

Focus ..510..... increasing haze

Spectr. Temp. 21°F Dome Temp./Hum. 15°F / 100%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/800		6.3	F2 IV	BC	830/.68	3S	IIaO	B	Bi Cep / Evans	Focus 510°	
40/80		4.2	F-G IV	"	"	"	IIaO	A	Bi Cep / Evans		strong
200/367	2-3"	7.9-8.8	F6-G1	"	"	"	IaO	B	Cep / Evans	F = 29°F spectrograph v. sl str	
200/130	2-3	5.89	BC III	BC	1200/.025	3S	IIaO* e	A	Tur Pgm	T = 22°F F = 50%	fine
400/410	3	6.9	A0	"	"	"	"	B	Sp Bi - Ly		fine
							IIaO-E*				
				BC	1200/.025	3S	"	A		T = 21°F F = 50%	

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Date 11/12/81 Observers Gu-Ri

Emulsion Batches: HIE baked 1½ hr. 60°C

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45503	HD 33904	01 22.4	+[illegible]°46'	01 36	03 03	1017W	+89°08'		30-30
45503F	Spot calc - for [illegible]		45503-04			D4 10min 7½V 7680(2)	D3 30min 546%(1)		
45504	HD [illegible]	23 35.5	+57°54'	03 20	06 33	0640E	+58°22		30-30
45504F	focus test							Nc/-	10/10

Spectr. Temp. 24°F Dome Temp./Hum. -19°C / 80% Transparency Conditions clear very windy 12.0

Focus 511

Spectr. Temp. 10°F Dome Temp./Hum. -15°C / 80%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/1000	8-10"	2.0	ceph	BC	830/.9	150µ/.5	HIE	A	IR ceph	'V' filter tele reversed	good
22/433	1'	4.0	ceph	"	"	"	"	B	"		weak
				B.C.	830/.9	150		A		T 10°F 511	

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Tour from Scarborough ~50 students looked at Moon + planets

8m 69° HIE film – unbaked

Emulsion Batches:

8m 69° Ilford E 25070 – 07021

5m 64 Ilford 07119 – 05011

5m 68 098-02E 07119 – 07011

Date 12/13 Feb 1981 Thurs Fri Observers Bln – R; Gw – R

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45505F	Focus Test							Fe Ne/Wratten	10-10
45505	HD 19356	03H01M.7	+40° 34′	18 19	18 30	00 37W	+40°55′	Fe Ne/Wratten	4-4
45506	HD20902	03H 17M.3	+49° 30′	18.33	18 45	00 37W	+49°50′	Fe Ne/Wratten	4-4
45507	HD5394	00H 50M.7	+60 11′	18 52	19 01	03 20W	+60° 39′	Fe/– Ne/–	4-4-4 12-12-12
45508	HD 5394	00H 50M.7	+60° 11′	19 07	19 15	03 34W	+60° 39′	Fe/–	24-24
45509	HD41335	05H 59M.4	−6° 42′	19 22	20 37	00 11E	−6° 39′	Fe/– He/–	4-4-4 12-12-12
45509T	spectral tri plates	45505+06				15min @ 15U D4 3900	7U D1 Hd	D3 4300	D2 4810
45509T2	spectral tri plates	45507+09			15min	15U D3 4810	7U D1 Hd	7U D2 5450	
45510	HD33328	05H 04M.4	−8° 53′	21 11	21 39	01 45W	−8° 45′	Fe/–	18-18
45511	HD 37468	05H 33M.7	−2° 39′	21 41	22 01	01 39W	−2° 34′	Fe/–	13-13
45512	HD41335	05H 59M.4	−6° 42′	22 04	23 55	03 07W	−6° 39′	Fe/–	12-12
45512T	Spectral tri plates	45508, 10-12			15min	17.5U D4 3900	15U D4 4320	15U D4 4810	
45512F	focus test							Fe/	14-14
45513	HD 8890A	01 22.4	+88° 46′	03 00	03 48	11H05W	+89° 10	Ne/–	30-30
45513T	spectrals tri plates	45513+11				7½V D4	15min 7680	D3 30min 3960	

Spectr. Temp. 15° F ..... Dome Temp./Hum. 12C / 75% Transparency Conditions 122

Focus .. 511 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/.6	150/.7	IIa-0E	A		T=15° F F=511	
40/299	4	2.2-3.3	B8V	BC	1200/.6	150/.7	IIa-0E	B	UV Test		
40/357	4	2.27	F5Ib	BC	1200/.6	150/.7	IIa-0E	A	UV Test		
40/56	4	2.43	B0e	BC	1200/.7	150/1.0	098-02E	B	Be-Bln	Fe may have been w/ ND on 1st 2 exp.	sl str.
40/294	4	2.43	B0e	BC	1200/.025	BS	IIIa-JEb	A	Be-Bln		str
90/200	4	5.16	B2e	BC	1200/.7	150/.7	098-02E	B	Be-Bln		fine
							IIa0-E				
							098-02E				
40/180	4	4.07	B2IVe	BC	830/.68	BS	IIIa-JEb	B	Be-Bln	T=14° F=513	v sl str
40/171		3.51	09.5V	BC	830/.68	BS	IIIa-JEb	A	S13-Bln		v sl str
40/125		5.16	B2e	BC	830/.68	BS	IIIa-JEb	B	Be-Bln	Cloud	fine
							IIIa-JEb				
				BC	830/.68	BS	IIIa0-E	A			
40/300	3-4	2.0	cepl	BC	830/.900	150/.3	HIE	A	IR Cepl	telescope reversed	fine

123 T2

Date ...Feb.13..1981... Observers ...Gu-Ri.....

Emulsion Batches:
HIE film unlabeled
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45514	HD 213307	22 25.5	+57054	03 57	06 31	06 30 E	+58°17	Ue/-	30-30-30
45514F	focus test							Ue/-	200/200

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .. Several wisps for 1.24
clouds at 12.10

Focus ..... 513 .....

Spectr. Temp. ..14°F..... Dome Temp./Hum. -..14°C/..82%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
80/300	3-4"	4.0	Capt	B.C.	830/.9	150/3	HIE	B	Capt IR.	T= F5	weak
				B.C.	830/.9	150/1.0	HIE	A	−6.7μ	T=14°F F513	v s/blue

125

Date Sat/Sun Feb 14/15 Observers KK-Jn

Emulsion Batches:
- 6" IIaDe 29070-07001
- 5" IIaJ-e
- 5" HIE GA43-033-03 exp 11/78

H&K unbaked Ga43 03102

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45515F	Focus Test							Fe/	15-15
45515	HD 18925	2 57.6	+53 07	18:18	18.49	1 08 W	+53 33	Fe/	1-2-4
45516	HD 32147	4 55.9	-5 52	19 15	20 36	0 58 W	-	Fe/—	4-4-4
45516T	Spot Calib for 45515-17			(approx 25 min @ 15V D4 3900)		15V, 15 min D4 3900, (15V 15 min D3 4300)			
45517	HD 47105	6 31.9	+16 29	20 41	20 45	0 29E		Fe/—	6-6
45518	HD 66751	7 59.9	+70 0	21 21	23 03	0 18W	+69 53	Fe/—	4-4-4
45518T	Spot cal. (Test)		(1) 846A D3	7½V 30m					
45519	HD 76644	8 52.4	+16 26	23 08	23 33	0 58W		Fe/—	14-14-
45520	HD 81797	9 22.7	- 8 14	23 42	0 11	0 06W		Fe/—	6-6
45521	~~HD 86668A~~	~~01 22.5~~	~~-55 41~~	~~00 33~~		W		no	- -
45521T1									
45521T2	Spot Calib	For 45519,-520	15 min @ D4		17.5V 3900	15V 4300	15V 4310		

Spectr. Temp. 31° Dome Temp./Hum. 27°F / 60% OUT Transparency Conditions Sl. M. haze - very hazy.
Focus 505 12c
Spectr. Temp. 30° Dome Temp./Hum. 20°F / 100%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/.2	150μ	IIaO	A			3 blue
40/300	2-3	3.4	G8III + A3V	BC	"	"	"	B	Asm Sp/KK	Radium test 40/37	strong
400/A65		7.7	K3V	"	1200/-.025	BS	"	A	"	Blue shows some Sky Hare type fringe & weak	
							"				
40/45	2"	1.9	A0IV	BC	1200/-.025	BS	"	B	Asp. Sp + t	moonlight almost gone Red end broken off	weak str. [illegible]
400/A00	2"	7.1	dF8	"	830/.680	BS	"	A	Asm Sp KK	F = 50f HAZE	[illegible]
							HIE				
40/150		3.3	A5	BC	830/.68	BS	IIIaJe	A	Asm Sp KK		fine
40/46	2"	2.2	K3	"	"	"	IIaO	B	Std Vel		
/	"	2.0			830/.7	150μ/3	HIE	A	IR spark	V. filter unbaked HIE [illegible] Too [illegible]	
							Dale				

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Date 15/16 February 1981 SUN/MON Observers Bln.-Tn. / Gu.-Tn.

8m 6s

Emulsion Batches:
II-O-E 29070 - 12020 18 19A
HIE 5143.03102 unbaked

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45521	HD 45995	6H 25M .6	+11° 19'	22:52	00 19 D4	03 16W D3	+11° 18' D3	Fe/-	4-4-4
45522T1	Spot Calib for 45521			15min	15V 3900	4300	4810		
45522	HD 45570A	01 22.4	-85 46	10 30	01 18	03 45W D4 10min	+69 11 D3 30min	Ne/-	30-30
45523T	Spot calib for 45522-23				7½V	8464	8464		
45523	HD 8590A	01 22.4	-85 46	01 21	02 20	09 44W	+69 11	Fe/Ne/ 6x66	10-10
45523F1	Focus Test							Fe/Ne/ 6x66	20-20
F2	"							Ne/-	20-20
F3								"	30-30
F4									
45523T2	spot calib (test)	(3)	8464	D3 30m	7½V				

Spectr. Temp. 36°F Dome Temp./Hum. 33°F/71% Transparency Conditions Hazy + cirrus

Focus 507

Spectr. Temp. 38°F Dome Temp./Hum. 34/73

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/175	3"	6.04	B2V nne	BC	830/.68	B3	IIa-0e	A	Runaway		
							"				
40/	3	3.0		"	830/.9	150μ B	HIE	B	IR coph	'V' filter	fogged
/300	4	3.0	"	"	"	"	"	A	"	cloud	fine
				RC	30/.9	150 μ	098	A	F should be 497	40°F F = 505	red
				"	"	"	"	B			red
				"	"	RS	"	A	should be 560		
				"	"	"	"	B			
							HIE (flashed)	8%	forming gas	baked 25°C 18 hr	

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Date Wed-Thurs Feb 25-26 Observers Ly-R./Gu-Ri

Emulsion Batches:
8" 68° (new D19) Ilford E 21070-12020 23 211
" HIE G4143.031.02 unbaked

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45524	HD 27383	04 14.2	+16 18	21:38	22:54	04 41W	+16 34	Fe/-	5-4-4
45524T	spot cal plate	for plate	45524-25			15 min @ 15 volts	D4 3900	D3 4300	#2 4810
45525	HD 98547	11 15.2	+17 52	23:00	00:07	01 06E	+17 30	Fe/-	4-
45525F	focus test				00:08	01 04E	+17 30	Fe/-	14-14
45526	HD 52973	06 58 11	+20 43	00:20	01:56	05 10W	+20 42	Fe/-	30-
45526T	spot cal for plate	45526-28				7hV	D4 10 min 7500	D3 2464	
45527	HD [illegible]	01 24.4	+22 46	02:06	03:45	10 58 W	+19 07	Fe/-	
45528	HD 213307	22 35.5	+57 54	03 55	04 14	05 50 E	+58°24		30-3

Spectr. Focus Spectr. Exp Min

Spectr. Temp. 40°F Dome Temp./Hum. 35°F / 94% Transparency Conditions ok but windy 1/30

Focus 505

Spectr. Temp. ____ Dome Temp./Hum. 30°F / 96%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4400/150	5	7.4	F8V	BC	830/.68	BS	IIaO-e	A	Hyades-Tnr		high fog sl. weak
							IIaO-E				good, but high fog
4400/230		6.9	A0	BC	830/.68	BS	IIaO-e	B	Sp Bin-Ly		F=20
				B.C.	830/.68	B.5	IIaO-E	A		T=38°F F=505	sl. weak
4400/230	5	4.0	cepk	"	830/.9	150μ/3	HIE	A	IR cepk	'V' filter F=506	weak
4400/230	5"	2.0	cepk	"	"	"	"	B	IR cepk		fine
4400/650	"	1.3	"	"	"	"	"	A	"	T=36°F F=507 some clouds	sl. weak
										T=35°F	
					new D 19						

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Date Thu/Fri. 26/27 Feb 1981 Observers Bln.-R. / G.-R.

Emulsion Batches:

8" HIE G4143 081 02 5" 098-02 - 7.119 - 12021 22 208

HIE sensitized 5" IIIa-J cb 71-9 - 01281 20 263

3" at 65°C in 7% H_2 8" IIa-E 29070 - 12026 23 216

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Exp. Mtr.
45529	HD 5394	00h 50.7m	+60° 11'	18:30	18:40	03 54 W	+60° 42'	Fe/-	6 6	
								Ne/-	18	
45530	HD 5394	00h 50.7m	+60° 11'	18:44	18:50	04 05 W	+60° 42'	Fe/-	18-18	
45531	HD 33328	05h 04.4m	-8° 53'	18:55	19:24	00 25 W	-9° 40'	Fe/-	18-18	
45532	HD 37468	05h 37.7m	-2° 39'	19:28	19 44	00 17 W	-2° 33'	Fe/-	18-18	
45533	HD 41335	05h 59.4m	-6° 42'	19:48	21:13	01 20 W	-6° 36	Fe/-	12-12	
45533T1	spectral fr plate	45529 + 34			15 min @		Hα	7 / D2 5	50	
45533T2	spectral fr plate	45533 - 33			15 min @ D4		15V 4800		48	
45534	HD 41335	05h 59.4	-6° 42'	21:21	22:52	02 59 W	-06° 55	Ne/-	4-9	
								Ne/-	12-12	
45535	HD 88021/2	10h 03.8m	+20° 49'	23:00	23:50	00 06 E	+20° 30'	Fe/-	4-4	
45536	HD 52973	06 58.2	+30 43	23:59	01 53	05 00 W	+30 42	He/-	30-30	
45536T	spectral fr plate	45535			15 min @	D4 15 Volts 3900	D5 4300		D2 810	
45537	HD 8890A	01 33.4	+54 46	01 06	01 30	10 37 W	+54 07	Ne/-	30 30	
45537T	Spectrum for plate	45536 - 38				D4 7½V	10 min D3 7670	30 min 846	1	
45538	HD 20307	03 35.5	+57 54	02.40	05:14	05 00 E	+58 25	He/-	30-30	
45538T	spectrum TEST		(2) 2464	D3 30 min	7½V					
45539F	Focus Test							Ne/-	30	

Spectr. Focus... Spectr.

Spectr. Temp. T= 37°F ..... Dome Temp./Hum. 30°F / 89% Transparency Conditions 132

Focus .... 507 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/60	6	2.43	B0e	BC	1200/.7	V Filter 150/1.0	093-02E	A	Be - Bl	♀ 37° 507	strong
40/160	6	2.43	B0e	BC	830/.68	BS	IIIa-Jb	B	Be - Bl	♀ 37° 507	strong
40/130	4-6	4.07	B2Ve	BC	830/.68	BS	IIIa Jb	A	Be - Bl		sl str.
40/180		3.51	09.5V	BC	830/.68	BS	IIIa-Jb	B	SB - Bl		strong
40/200		5.16	B2e	BC	830/.68	BS	IIIa-Jb	B/A	SB - Bl		v sl str.
							098-02E				
							IIIaJeb				
40/100	5	5.16	B2e	B.C.	1200/.7	150/.7	098-02E	B	Be - Bl		strong
400/400	5	7.20	9 G5 A2	B.C.	830/.68		IIIa 0e	A	VB - Bl	T= 34°F F= 508	v sl str.
20/507	"	4.10	eyepc	"	830/.7	150w/.3	HIE	B	IR Ceph	'V' filter	good
							IIaO-E				
/300	3-4	3.0					HIE	A			fine
							HIE				
/700	3-4	4.0						B		T= 32°F F= 509	good
							HIE*				light struck
						50/1.0	HIE*	B		T= 30°F F= 509	

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Date Thurs./Fri. 26/27 Feb Observers Gu.-Ri.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45539	HD 889 A	01 22.4	+88 46	05.24	05:50	10.24 E	+89 18	No filter	30-2c-30
45539F	focus test							Fe/-	15-A

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 1.3.4

Focus ..... 509 .....

Spectr. Temp. ...30°F..... Dome Temp./Hum. 26°F/96%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/300	3-4"	2.0	ceph	BC	230/.7	150/1.3	HIE*	A	IR Ceph	11'5 IR	strong
				B.C.	834/.650	150/1.0	IIa-E	B		T = 30°F F: 509	ok smoothed

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Date ... Feb. 27-28/81 Observers ... Cw - Ri

9^m 67° Emulsion Batches:
$4\frac{1}{2}^m$ 68° IIaJ-E - 29070 - 26021 .23 2.14
IIaJ-eb - 07.11.9 - 27021 .17

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45540F	Focus test							T-I-	18-18
45540	R TRI	$2^h 31.^m0$	+33°50′	18:45	20:45	$4^h 23^m$ W	+34° 12	Fe/-	5-5-5
45540T	spectral plate for plates 45540-					15 min @	15 volts	D4 3900 D3 4300	D2 4810
45541	56 VY LEO	$10^h 50.^m8$	+6°43′	21:01	22:35	02h02E	+6°21′	T-I-	5-10
45541T	strip calibration	180°							

Spectr. Temp. ..... Dome Temp./Hum. +02°C 65% Transparency Conditions .. THIN CLOUD ALL 136 OVER SKY (SUNSET)

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B.C.	830/.680	150/1.0	IIaO E	A		q=390 F=506	
400/391	2"-3"	7.3	M4-M8e	BC	830/.68	150/0.3	IIa-0E IIaJ-E	B	CrW-MRAS	CLOUD THICKENING.	5-e
400/254 (needed 400?)	11	7.5	*M-STD. M5-SIII	BC	830/.68	150/0-3	IIaO E IIaJeb	A	CrW/M.RA.S	THICK CLOUD AT 22:30	5/-k

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Mon/Thu

Date Mar 2/3 .... Observers Rm - Bts ....

Emulsion Batches:
....
....
....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
95542	HD30[illegible] AU [illegible]	04h 41.1	+36° 33	19 27	20 17	2h 1W	+3[illegible]° [illegible]	Fe/—	5 - [illegible]
95542T ✓	spot cal plate	for plate	95542	5 min	@ 15V	D4 3000	B[illegible] [illegible]		
95542F	Focus Test							Fe/—	15 - 5

Spectr. Temp. 35° F ..... Dome Temp./Hum. ..... Transparency Conditions 1.38

Focus ... 508 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

radium spot 37/min

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30c / 28		29-	F6- G1	BC	830/.68	Bs	IIaE	A	Ceph/	clouds	s1 blurk vv wk
				BC	830/.68	Bs	IIaE	A		33°F focus 507	

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Date March 3/4 Observers Bts/Ave

Emulsion Batches:
5" 098
8" 420

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End X	Declination	Comparison Type/Filter	Comparison Exp.
45543	HD31964	4 54.8	43° 41	17h53	17h56	3?00W	43 50.6	Fe/WD Ne/—	F- 8 8- 8
45544	HD 23410	1h 22.4	+88 46'	18h25	18h27	≈2 37W	89 11.9 (overlap)	Fe/WD Ne/—	
45545	HD 97991	11h 11.1	-2 55	10 44	~~12 03~~	0h 36m E	-3 22'	Fe/—	5—
45F	focus		*(adjusted)	10 44 →	23 40	1 04 W	SC	Fe/—	

Spectr. Temp. 28°F Dome Temp./Hum. 23°F/80% Transparency Conditions clear, scattered clouds about 7140

Focus 510

Iridium Test 41 counts

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/22			48Ia	Bc	1200/1.7	150/1.*	098aze	A	Ave Progr.	"V" Filter Used on	
40/22			F8Ia	"	"	"	"	A	"		
400/105		7.18	B2I	"	830/1.68	35	Hae	A	Runaway	Most counts in first minute - clouds	
				"	"	"	"	A		22°F 510	
				098	cal plate too big for holder/broken in attempt to slice piece off						

141 Thurs - Fri

Date Mar. 5-6 /81 Observers ... Th

5m 68s Emulsion Batches: Made 07119 - 27021

5m 68s 098-02e 07119 - 27021

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45546	HD 138749	15 28.9	+31 42	01 53	02 28	02 26E	+31 31	Fe/—	12-12-12
45546T	Spot Calib	for 45546-48			15min @ 04	17.5V 3900	15V 4390	14V 4810	
45547	HD 141513	15 44.4	-3 07	02 33	03 21	01 51E	-3 16	Fe/—	12-12-12
45548	HD 149757	16 31.7	-10 22	03 25	03 42	02 15E	-10 23	"	12-12-12
45549	"	"	"	03 59	04 19	01 39E	"	Fe/—	7 - 7
								Ne/—	10 - 10
45550	HD 141513	15 44.4	-3 07	04 17	04 48	00 22 E	-3 16	Fe/—	6 6
								Ne/—	16 16
45551	HD 138749	15 28.9	+31 42	04 52	05 31	00 37 W	+31 31	[illegible]	6 - 6
								[illegible]	16 - 16
45551T	Spot Calib for 45549-52				15min @ 48	15V D3 7V D1 Hα	7V D2 5m 50		
45552	HD 161096	17 38.5	+4 37	05 38	05 48	01 16 E	+4 43	Fe/—	6-6
								Ne/—	16-16
45552F	Focus Test					"	"	Fe/—	20
								Ne/—	30

Spectr. Temp. 32°F/..... Dome Temp./Hum 27°F/95% out Transparency Conditions ...5.0.50.....1.4Q

Focus .....506.....

Spectr. Temp. ..29.5°F..... Dome Temp./Hum 21°F/95%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/190	2"	4.10	B7 III	BC	1200/.025	BS	IIIaJ-a	A	Be-Blq		fine
							IIIaJ-e				
40/200	3"-5"	3.50	A0 V	BC	1200/.025	BS	IIIaJ-e	B	SB Blq	cloud	good
40/160	5"	2.58	O9.5 V	"	"	BS	IIIaJ-e	A	Be - Blq		
40/55	3"	"	"	"	1200/.7	v F,Hor 150/.7	098-02E	A	"	* Slicer Comp used filter cut in for all 1200/.7 exps	s/str
40/40	3"	3.50	A0 V	"	"	"	"	B	SB Blq	T=32°F set 508 (Brace Lens in humidor)	fine
40/50	3"	4.10	B7 III	"	"	"	"	A	Be Blq		fine
							"				
40/42	3"	3.9	K2 III	BC	1200/.7	v F,Hor 150/.7	"	B	std vel		fine
				"	"	v F,Hor 150/1.0	098	A		T=29.5 Set 508	OK

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Date Mar. 6/7 Observers A.e.-T.a

5¼ᵐ 69° Emulsion Batches: 098-02E 07119—27071

098-02E —

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45553F	Focus Test					Reversed	+56 48.9		
45553	HD217476	22 55.9	56° 25	18 52	20 31	8ʰ 13 W	+56 48.9	Fe/—	6 - 6
								Ne/—	16 - 16
45554	HD31964	4 59.8	93° 41'	20 41	20 53	2ʰ 30 W	+93 48	Fe/—	6 - 6
								Ne/—	16 - 16
45555	HD7927	1 13.8	57° 42'	20 06	22 08	7 30 W	+58 06.7	H	2 - 6
									16 - 16
45555T	Spot Calib	for 45554-55		15 min @	15V D3 4810	7V D1 HV	7V D2 5450		

Spectr. Temp. +32°F ..... Dome Temp./Hum. +21°/70% Transparency Conditions 1.44

Focus .... 5.08 .....

Spectr. Temp. +27 °F ..... Dome Temp./Hum. +22 /..... %

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/.7	150/1.0	II a0 098 ?	B	discarded	Not an 098	cent sl rod 1 line
400/83	3"-5"	V 4.99	GOIa	"	"	150/.7	098-02E	A	Arc prog	Lost 4x5 sh	sl wk
400/225		V 2.99	ABIa	"	"	"	098-02E*	B			fine
400/95		4.95	FOIa	"	"	"	"	B		cloud Sol 510 T-2F°C	v sl wk
							"				

Exp

145 Sun-Mon

Date March 8/9/81 Observers Arc-Tn/

5¼ᵐ 69° Emulsion Batches: 098-02E 05031-0603/

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45556	HD7927	1ʰ13.8	57°42	22ʰ36	23 25	8 55W	+58°07.8	Fe/—	6 - 6
								Hg/—	16 - 16
45556T	Spot Calib	for 45556-58.		15min @	15ᵛ D3 48	7ᵛ D1 Hα	7ᵛ D2 54	Ø	
45557	HD8890	1ʰ22.5	88° 46'	23ʰ34	23 36	8 27W	89° 11.5	1	6 - 6 16 - 16
45558	HD31964	4ʰ59.8	43° 11'	23ʰ47	23ʰ54	5ʰ 45W	43° 18.5	1	6 - 6 16 - 16
45558F	Focus Test (Reversed)					5 55W	11	Fe/—	16-16

Spectr. Temp. +39°F ..... Dome Temp./Hum. +32°F / 80% Transparency Conditions ... Kal ..... 14.6.

Focus ... 5.06 .....

Spectr. Temp. +38°F ..... Dome Temp./Hum. +30 / 70%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/250	3"	4.95	FOIa	BC	1200/.7	150/.7	098-02E	A	Arc-prog	reversed	v sl str
							098-02E				
90/13	3"	2.5	FB16	〃	〃		〃	B	〃	〃 guiding	
200/100	3"	2.99	AB1a	〃	〃	〃	〃	B	〃		v sl str
				〃	〃	150/1.0	098	B			OK
										fog slightly high, will decrease development time, so hold with these counts.	

14/147

8h 68°

Emulsion Batches: ~~Dat. 24079 05031~~

Date Mar 9/10 1931 Observers R.m-T

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Exp Mtr.
45559	HD17963 = SUCas	02h43.0	+68°28	18h58	20 11	4 14 W	+68.48	Fel-	5 5-	1
45559T	Spot Calib for	45559-		15min ea	15V 3400 D4	4300 D3	D2 +810			

Spectr. Temp. 39°F ..... Dome Temp./Hum. 34°F/77% Transparency Conditions ... hazy - cloudy ... 148

Focus ..... 507 .....

Spectr. Temp. ..... Dome Temp./Hum. ...../.....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
300/194	2-3'	6.4 - 6.7	F516 -1776	BC	830/168	BS	IIaO-e	A	Bin Ceph/Evans	reversed cloud	v sl sm
							IIaO-e				

1149

Date Thursday, March 12 (11-12) Observers G.S. - Tn

8m 68s

Emulsion Batches: II-O-E 29710 - 06031

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45560 ✓	HD 97991	11h 11.m1	-2° 55'	00:07	02:24	02h 11m W	-3 23	Fil -	5-5
45560T̃	Spot Calib	for 45560		15min @ 15V		04 3900			

Spectr. Temp. +34°F ..... Dome Temp./Hum. +26°F / 97% ..... Transparency Conditions ..... Cloudy 150

Focus ..... 507 .....

Spectr. Temp. +31°F ..... Dome Temp./Hum. +25° / 86% .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/130	4"	7.18	B2I	BC	830/.68	BS	IIaO-e	A	Runaway +	T=34°F F=507	v sl weak

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Date MAR 12/13 THURS FRI Observers Ly-Ta/Ta

3m 69° Emulsion Batches: II a0-e 29070-06071

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45561	HD30869	4 46.2	+13 29	21:06	22 22	4 34 W	+13 41	Fe/-	7-7-7
45561T	Spot Calib for	45561-	65	15 min	15V 3900 D4	4320 D3	48 D2		
45562	HD 94118	10 46.7	+46 20	22 28	00 17	00 23 W	+45 52	Fe/-	7-7-7
45563	HD 98547	11 15.2	+17 52	00 28	01 24	1 10 W	+17 28	"	5-5-5
45564	HD 143313	15 54.6	+25 52	01 30	04 43	0 9 E	+25 39	"	5-5-5
45565	HD 161096	17 38.5	+ 4 37	04 46	04 57	1 42 E	+4 36	"	5-5-5
45565F	Focus Test							"	15-15

Spectr. Temp. 39°F ..... Dome Temp./Hum. +35°F / 86% ..... Transparency Conditions ... Fine 1.50

Focus ..... 504 .....

Spectr. Temp. 36 °F ..... Dome Temp./Hum. +30°F / 100% .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/380	2-3	6.8	F7V	BC	1200/-.025	BS	IIaDe	A	Hyades - Tnv		v sl wh
							IIaO-e				
400/350	12"	7.13	A2	BC	1200/-.025	BS	IIaO-e	B	SP - Ly		fine
400/380	3-4	6.87	A0	BC	830/-.68	BS	"	A	"	38°F F=506	fine
800/540	1-2	9.5	K5	"	"	"	"	B	H+K - Ly	38°F intermittent clouds	v faint
200/185	2"	3.9	K2III	"	"	"	"	A	Sky/Vel		fine
				"	"	"	IIaO	B	Set 506 T 36°F		ok

153

Date MAR 13-14/81 Observers Cnw-Tzn

Emulsion Batches:
IIa-e 29070-06031
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45566 ✓	5 VIR	$13^h27.^m8$	−6°41′	2:13	4:48	2^h25^m W	−7 05	Fe/−	55-5
45566T	Spot Calib	for 45566-67		15 min @ 15V	D4 3900	D3 4300	D4? 4810		
45567	10 HER	$16^h07.^m4$	+23°45′	4:52	6:00	0 57 W	+23 35	Fe/−	5-5-5
45567F	Focus Test		〃			〃	〃	Fe/−	15-15

Spectr. Temp. 30°F Dome Temp./Hum. t20°F/89% Transparency Conditions ... MOSTLY CLEAR ... 154

Focus 509

Spectr. Temp. 23°F Dome Temp./Hum. t12°F/90%

Fine Aurora visible after 9^h good red & green

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/400	4"	8	M6-M7e	BC	839/0.68	150/0.3	IIaO-E	A	CRW - MIRAS	(155^m)	exp good sl. flare?
400/390	5"	7.5	M4 III	"	"	"	"	B	"	Set 511 T 34°	fine
				"	"	"	IIaO	A		(68^m)	good
										upper & lower comparison unequal	

155 SAT-SUN

Date MAR. 14-15/81. Observers B.K.-Th.

Emulsion Batches: II a-e 2907 0-06031

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45568	HD 71152	8 20.7	+24 52	20 25	21 19	0 06W	+24 42	Fol-	5-5-5
45569	HD 71153	8 20.7	+24 52	21 20	23 40	2 28W	+ "	"	5-5-5
45569T	Spot Calc for	45568-	77		15min @ 15V	D4 3.00	D3 4.00	D2 4.02	
45570	HD 97822	10 02.5	+32 06	23 44	00 24	1 30W	+31 47	Fol-	5-5-5
45571	HD 119124	13 36.3	+51 02	0 30	01 50	0 36E	+50 40	"	5-5-5
45572	HD 124674	14 09.9	+52 16	1 53	03 21	0 21W	+51 58	"	5-5-5
45573	HD 124675	14 09.9	+52 16	3 24	03 33	0 34W	"	"	7-7
45574	HD 146361	16 10.9	+34 07	3 40	04 12	0 49E	+33 59	"	5-5-5
45575	HD 157910	17 21.0	+37 02	04 18	05 14	0 55E	+37 03	"	5-5-5
45576	HD 146361	16 10.9	+34 07	05 16	05 36	0 36W	+33 59	"	5-5-5
45577	HD 161096	17 38.5	+4 37	05 40	05 42	0 45E	+4 41	"	7-7

Spectr. Temp. +30°F ..... Dome Temp./Hum. +29°F / 72% Transparency Conditions ... hazy - to good ... 1.56

Focus ..... 509 .....

Spectr. Temp. +33°F ..... Dome Temp./Hum. +27 / 90% ..

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/340	2-3	7.18	A3	BC	830/68	BS	IIaO-e	A	Wal prog		v sl str
400/350	2"	8.2	G0	"	"	"	"	B	"		good
							"				
400/350	3"	6.6	F5	BC	830/68	BS	IIaO-e	A	"		fine
400/350	3"	6.9	F8	"	"	"	"	B	"		fine
400/320	4"	6.61	F0	"	"	"	"	A	"		fine
40 28	5"	4.6	A6	"	"	"	"	B	"	T=133°F	v sl str.
400/320	5"	6.2	F8	"	"	"	"	A	"		fine
400/350	5-2"	7.1	G5	"	"	"	"	B	"		fine
400/175	2	6.2	F8	"	"	"	"	A	"		v sl str.
40/40	2	3.9	K2	"	"	"	"	B	Ld. vel		fine

157 Mon-Tues

Date ..Mar.16-17/61.... Observers ..Rm-Tn.....

Emulsion Batches:
...IIaO-E..29070—06031
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45578F	Focus Test					0	+27	Fe/—	17-17
45578	νPer = HD 23230	3h 38.4	+42° 16	18 59	19 06	00 42W	+42 33	Fe/—	7-7
45579	μ Per = HD 23630	4h 7.5	+47° 9	19:09	19:32	2h 39W	+48° 26	Fe/—	7-7
45579T	Spot Calib.	for 45578			15 min @ 15V	Δ9 3h	D3 +30		
45580	HD 45910 = RT Aur	α 32.1	+30° 33	19 36	20 50	1h 41W	+30 29	Fe/—	7-7

Spectr. Temp. +27°F ..... Dome Temp./Hum. +20°F / 70% Transparency Conditions ... Fine - s. cloudy 1528

Focus ..... 510 .....

Spectr. Temp. ..... Dome Temp./Hum. ...../.....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	IIaOE	B			s! red
40/70	1"	4·2	F5II	BC	830/.68	BS	IIaOE	A	Bur Cupk/Evans		s! strong
7/16	1-2"	5·10	G0Ib	"	"	"	"	B	" "		v sl strong
							"				
7/12	2-3	5·5	F5II	BC	830/.68	BS	"	A	Bur Cupk/Evans	Close	v sl str
										all comparisons slightly strong	

159

Date MAR 17/18 81 TUES/WED Observers Ly - Tn

7m 69° Emulsion Batches: No. 2 29070 - 05031
No. 5 29070 - 16031

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45581	HD30869	4 46.2	+13 29	19:21	21:27	3 59 W	+13 41	Fe/-	6-6-6
45581T	Spot Calc for 45581	-83		15min @ 15V		D4 3900	D3 4300	D2	
45582	HD94118	10 46.7	+45 54	21:37	23:59	0 32 W	+45 55	Fe/-	6-6-6
45583	HD98547	11 15.2	+17 52	00:07	01:23	1 29 W	+17 28	Fe/-	5-5-5
45584	HD143313	15 54.6	+25 52	01:29	05:40	01 09 W	+25 43	Fe/-	5-5-5
45584T	Spot Calc for 45584			15min	@15V	D4 3900	D3 4300	D2	
45585	HD161096	17 38.5	+04 37	05 47	05 49	0 27 E	+4 37	Fe/-	7-7
45585F	focus					0 25 E	"	Fe/-	17 17

Spectr. Temp. 20°F ..... Dome Temp./Hum. 11°F / 77% Transparency Conditions .. good ... breezy ... 160

Focus ..... 509 .....

Spectr. Temp. 12.5°F ..... Dome Temp./Hum. 6F / 90%.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/450	5-6	6.8	F7V	BC	1200/-.025	BS	IIaO-e	A	Hyades-Tmi-		fair
							"				
400/358	5*	7.13	A2	BC	1200/-.025	BS	"	B	SB-Ly		good
400/250	5-3	6 9	A0	BC	E30/-GE	BS	IIaO-e	A	SB-Ly	14°F 514	fine
400/270	5-3	9.5	K5	"	"	"	IIaO-e*	B	H+K-Ly	14°F 514.	good
							"				
40/3[illegible]	3	3.9	K2III	BC	E30/-GE	BS	IIaO-e*	A	Std Val		fine
				"	"	"	IIaO	B		12.5 514	sl red

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Date Wed/Tues. MAR. 15/17 Observers ...Gus - Ri.....

Emulsion Batches:
098.02 E - 05031 - 06031
Tao - E ... 29070 - 16031
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45586	HD 91316	$10^h 27.^m5$	$+9° 49'$	20:37	21:44	$01^h 18^m E$	$+9° 27'$	Fe/— Na/—	4-4-4 12-12-12
45586T1 ✓	spectral hr plate	45586			15 min @	150 D3 4810	90 D1 Hα	90 D2 5950	
45587	HD 91316 (close)	$10^h 27.^m5$	$+9° 49'$	21:53	21:56	$01^h 06^m E$	$+9° 27'$	Fe/—	7-7-7
45588	HD 43112	$6^h 09.^m5$	$+13° 53'$	22:06	22:26	$03^h 42^m W$	$+13° 52'$	Fe/—	5-5-5
45589	HD 45995	$6^h 25.^m6$	$+11° 19'$	22:31	23:04	$04^h 04^m W$	$+11° 16'$	Fe/—	5-5-5
45589T ✓	spectral hr plates	45587-			15 min @	150 volts D4 3900	D3 4300	D2 4810	
45590	HD 97991	$11^h 11.^m1$	$-2° 55'$	23:21	00:24	$00^h 38^m W$	$-3° 22'$	Fe/—	5-5-5
45591	HD 149363	$16^h 29.^m1$	$-5° 56'$	00:39	03:40	$01^h 21^m E$	$-6° 01'$	Fe/—	5-5-5
45592	HD 187567	$19^h 45.^m4$	$+7° 39'$	03:48	04:38	$03^h 42^m E$	$+7° 32'$	Fe/—	5-5-5
45593	HD 188439	$19^h 50.^m1$	$+47° 33'$	04:44	05:08	$03^h 14^m E$	$+47° 48'$	Fe/—	5-5-5
45594	HD 197419	$20^h 38.^m5$	$+35° 06'$	05:12	05:48	$03^h 24^m E$	$+35° 24'$	Fe/—	5-5-5
45594F	focus test							Fe/—	7-7-7
45594AT1	Spot cal.	15^m @ 7 ✓	D2 Hα						
T2	"		"						

Spectr. Temp. +25°F ..... Dome Temp./Hum. +19°F / 70% Transparency Conditions .. good 162

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +06°F / 98%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/50	2-3"	3.74	B1 Ib	BC	1200/.7	150/1.0	098-02E	A	Bln. Std.	Broken & cleaned T=25" Vfilter F=510	sl strong comp man
							098-02E				
40/30	2-3	3.74	B1 Ib	BC	1200/.025	BS	IIaO-e	B	Bln. Std.	+25°F F=507	fine
400/350	2-3"	5.67	B1 II	"	830/.68	"	"	A	Runaway *	+25°F F=511	sl strong
-c/350	2-3	6.04	B2 II me	"	"	"	"	B	Runaway *	didn't cap properly	fine
							IIaO-E				
400/350		7.18	B2 II	"	"	"	"	A	Runaway *	didn't cap properly	v sl strong
400/350		7.76	B0.5 II	"	"	"	"	B	Runaway *		fine
400/350		6.42	B2.5 II e	"	"	"	"	A	Runaway *	+20°F F=512	fine
400/350		6.18	B0.5 II ep	"	"	"	"	B	Runaway *		fine
400/315		6.52	B2 II e	"	"	"	"	A	Runaway *		v sl strong
				"	830/.68	"	"	B		+19°F F512	O/E weak strong
							IIaF plain				
							IIaF baked 4h in 5% H_2 at 65°C				very fog

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9m - Sat

Date MAR 20/21 1981 Observers Ake-Ri // AK-Ri

5m 68° Emulsion Batches:
8m 68° 098026 05031-06031
IIaO-E 29070-16031
IIaO-E 29070-18031

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45595	HD 7927	1h 13 8	+57° 42	19:20	19:57	6:15W	58 09.2	Fe/ –	4-4
45596	HD 19662	3h 16.9	+54° 55	20:11	21:13	6:25W	+55° 15'	Fe/ –	8-8
45596T	spectral for plate	45595-				15min @	15V D3 4810	70 D2 5450	70 HQ
45597	HD 18391	2h 52.2	+57 16	21:31	22:35	7:15W	+57° 33.1	Fe/ –	4-4
45598	HD 31961	4h 51.8	+43° 41	22:42	22:46	5:22W	43° 44.5	Fe/ –	14-14
45599	HD 8890A	1 22.5	+88° 46	22:00	23:01	9:14W		Fe/ –	6-6
45600	HD 161796	17 42.5	+50 05	23:12	23:59	5:52E	50 09.3	Fe/ –	4-4
45600F	focus test							Fe/ –	16-16
45601	HD 122742	13h 58.6	+11° 16	00:16	00:38		+11° 57'	Fe/ –	6-6
45602	HD 137909 R	15 23.7	+29 27	00.41	00 46			Fe/ –	6-6
45603	HD 137909	"	"	00.49	00:53			Fe/ –	9-9
45604	HD 103095	11 47.2	+38°36	00.58	01:37	1.24W	+37°56	Fe/ –	6-6-6
45604T	spectral for plate	45601-04				15min @ 15Volts	D4 3000 D3 4300	D2 4810	
45605	HD 124897	14 11.1	+19 42	01:42	01 42	0 54E		Fe/ –	9-9
45606	HD 124752	14 10 3	+58 53	01:53	04.25	1:49W	+67°44	Fe/ –	6-6-
45606T	spectral for plate	45605-				15min @ 15Volts	D4 3000 D3 4300	D2 4810	

Spectr. Temp. 32°F Dome Temp./Hum. 72% Transparency Conditions 1.6.4

Focus 508

Spectr. Temp. Dome Temp./Hum.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
450/225	3	4.95	FOIa	B.C.	1200/.7	150/1.7*	098-02E	A	Arc Prog	* 10 counts in compound position tele reversed 'V' filt	fine
400/200	3	5.40	F7Ib	B.C.	1200/.7	150/1.5	098-02E	B	" "	" "	fine
							098-02F			"	
800/400		7.46	K5	BC	1200/.7	150/1.5	098-02E	A	" "	" "	fine
40/20		2.99	A8III	BC	1200/.7	150/1.5	098-02E	B	" "	" "	v. faint
40/20		2.5	F9Ib	BC	1200/.7	150/1.5	098-02E	A	" "	" "	faint
232/116		7.67	F8	BC	1200/.7	150/1.5	098-02E	B	" "	" "	weak
				BC.	1200/.7	150/1.0	098-02E	A	"	28°F F:508	
320/160		6.90	G8II	B.C.	1200/.025	8.5	IIaO E*	B	Asm Sp/KL	28°F F.506	weak
120/60		3.72	F0p	BC	"	"	" "	A	"		Faint
90/45		3.73	F0p	BC	"	"	" "	B	"		faint
900/450		7.20	G8III	BC	"	"	" "	A	"		faint
							IIaO-E*				
120/25		0	K	BC	1200/.025	8.5	IIaO-E	B	Stnd Vol.		faint
890/445		7.6	K0	"	2.50/.58	"	IIaO-E	A	UMa/KL	27°F F:511	
							IIaO-E		43 60 F from bkt	26°F F:511	

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$8^m 68^\circ$

Emulsion Batches: Tmo-E 29070-19031

Date MAR 21/22 Sat/Sun 1981 Observers Tnr - Ri

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45607	HD 30869	$4^h 46.2^m$	$+13^\circ 29'$	$19^h 24^m$	$20^h 12^m$	$2^h 57^m$ W	$+13^\circ 41$	Fe/–	5-5-5
45607F	focus test							Fe/–	17 17
45607T ✓	spotted for plate	45609-			15 min	@ 15 Volts	D4 3900 D3 4300	D2 4810	
45608	HD 124752 A	$14^h 10.3^m$	$+68^\circ 03'$	$2^h 46^m$	$5^h 21^m$	$2^h 51^m$ W	$+67^\circ 45'$	Fe/–	5-5-5
45609	HD 161096	$17^h 38.5^m$	$+04^\circ 37'$	$5^h 27^m$	$5^h 28^m$	$0^h 32^m$ E	$+04^\circ 40'$	Fe/–	7-7

Spectr. Temp. ..... Dome Temp./Hum. 32°F 76% Transparency Conditions 166

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 30°F 99%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/322	1-2"	6.8	F7	BC	830/.68	BS	IIaO-E	A	Tnr Hyad Bin	clouds at end of exposure T = 35°F 507	fine
				"	"	"	"	B		"	
							IIaO-E				
300/550	1"	9.35	K1	BC	"	"	"	A	Tnr UMa	clouds for ½ hr.	good
20/20	"	3.9	K2III	"	"	"	"	B	Std, Vel.	T = 35°F 507	v. light

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Mon-Tues

Date MAR 23/24 1981 Observers Tor-R.

8m 68° Emulsion Batches: IIaO-E 29070-19031

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45610F	Focus Test							Fe/-	16-16
45610	HD 27383	4h 14.2m	+16° 18'	19h 12m	20h 32m	4h 02m W	+16° 32'	Fe/-	5-5-5
45611	HD 30869	4 46.2	+13 29	20 35	21 29	4 27 W	+13° 41'	Fe/-	5-5-5
45612	HD 48434	6 38.4	+4 02	21 33	21 51	2 57 W	+04°00	Fe/-	5-5-5
45613	HD 81797	9 22.7	-8 14	21 55	21 57	0 19 W	-08 32	Fe/-	7-7
45614	HD 109011	12 26.5	+55 40	22 06	00 43	0 01 W	+55 17	Fe/-	5-5-
45614T	spectral tn plate	45610-		15min @ 15 volts		D4 3900	D3 4300	D2 4810	
45615	HD 124752 A	14 10.3	+68 03	00 48	04 22	1 59 W	+67 43	Fe/-	5-5-5
45615F	focus test							Fe/-	16-16

Spectr. Temp. 44°F ..... Dome Temp./Hum. 36°F 74% Transparency Conditions ... Good ..... /60?

Focus ..... 505 .....

Spectr. Temp. ..... Dome Temp./Hum. 32°F 90%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B.C.	830/.68	B.S.	IIa-O.E	A		T= 44°F 505	
200/150	1-2"	7.44	F8	BC	830/.68	BS	IIaO-e	B	Tnr Hyad. Bin		fine
200/160	"	6.77	F7	"	"	"	"	A	Tnr Hyad Bin		fine
80/60	"	5.89	B0	"	"	"	"	B	Tnr Prog.		fine
20/20	"	2.2	K3	"	"	"	"	A	Std. Vel		fine
800/800	"	9.1	K2	"	"	"	"	B	Tnr U.Ma	emulsion scratched H & K T= 41°F 506	very fine
							IIaO-E				
800/650	1-2"	9.4	K1	BC	830/.68	BS	IIaO-e	A	Tnr U Ma	T- 39°F clouds 507	good
				BC	830/.68	B.S	IIaO-E	B		T: 37°F 507	

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Tour ~80 people looked at Jupiter
Ast 120 40mm. 8"68"

Emulsion Batches: IIaO-E 29070-21031

Date MAR. 24/25 1981 TUES/WED Observers TNR. - RI

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45616F	FOCUS TEST							Fe/—	16-16
45616	HD 81797	$9^h 22.^m7$	$-8^\circ 14'$	$19^h 15^m$	$19^h 21^m$	$2^h 13^m$ E	$-8^\circ 29'$	Fe/—	7-7
45617	HD 30869	4 46.2	+13 29	19 27	20 40	3 41 W	+13 41	Fe/—	5-5-
45617T	spotted for plate 45616 -				15 min @	15 Volts	D1 3900	D3 4300	D2 4910
45618	HD 48434	6 38.4	+4 02	20 43	20 58	2 08 W	+4 03	Fe/—	5-5-5
45619	HD 111456	12 44.3	+60 52	21 39	22 07	2 48 E	+60 29	Fe/—	5-5-5
45620	HD 115043 A	13 09.5	+57 14	22 13	01 44	0 25 W	+56 52	Fe/—	5-5-5
45621	HD 115043 A	13 09.5	+57 14	01 46	02:32	01:13 W	+56 52	Fe/—	5-5-5
45622	HD 122742	13 58.6	+11 16	02 38	03 28	1 19 W	+10°56'	Fe/—	5-5-
45623	HD 174403	18 45.2	-20° 25	03 56	05 23	1 28 E	-20°14	Fe/—	5-5-5

Spectr. Temp. 43°F Dome Temp./Hum. 37°F/94% Transparency Conditions scattered clouds for 1/2 of the night

Focus 505

Spectr. Temp. 37°F Dome Temp./Hum. 30°F/91%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Bc	830/.68	BS	IIaO-e	A			
40/40	~4"	2.2	K3	"	"	"	"	B	Std. Vel.		
400/320	"	6.8	F7	"	"	"	"	A	Tnr-Hyad. Bin.	clouds	fine
							IIaO-E				
80/60	"	5.9	B0	"	"	"	"	B	Tnr Prog.		Fine
200/160	~2"	6.3	F7	"	"	"	"	A	Tnr UMa	42°F Set 506	v sl str.
400/350	"	7.4	G1	"	"	"	"	B	Tnr UMa	clouds 23:00-1:15	fine
400/350	"	7.4	G1	"	"	"	"	A	Tnr UMa	39°F	v sl. str
200/200	"	6.2	G8	"	"	"	"	B	KK Prog.		v sl str.
300/245	"	7.48	B6 IV/V	"	"	"	"	A	Tnr-Sp Bin.	38°F 507	weak

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Date Mar. 21/26 wed/sun Observers Rm-Bts / KK-Bts

Emulsion Batches:
IIaOe 23070
IIaO 23070
IIaO

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
1 84F	focus							Fe/-	15-15
45624	HD 30282 Aw Per	04h 41.7	+36° 33'	19:24	21 : 30	04 41W	+36° 44		5-5-5
24T	spot cal for	45624 - 29		15m-15V	(1) D4 3900	(2) D3 1300	(3) D2 1810		
45625	HD 52773 = 5 Gem	06 51.2	+26 43	21 36	21:48	02 41W	26° 38	Fe/-	5-5-5
45626	HD 67599 = 5 Mon	08 3.6	-2° 42	21 53	22 15	02 05W	-1° 53	Fe/-	5-5-5
45627	R HD 67599 = 5 Mon	08 3.6	-2° 42	22 17	22 35	02 25W	-2 53	Fe/-	5-5-5
45628	HD 84081 = ELeo	09 70.2	+2°59	22 43	22 45	00 59W	+23° 56	Fe/-	5-5
45629	HD 89449 = 40 Leo	10h 14.3	+11° 57	22 52	22 58	00 37W	+19 32	Fe/-	5-5-5
45630	HD 111456	12h 49.3	+60 52	23 10	23 32	01 10E	+66 30	Fe/-	5-5-5
45631	HD 124752	14h 11.9	167° 42	23 38	02 00	00 10E	+67°41	Fe/-	5-5-5
32T	spot cal for	45630 -		15m-15V	(1) D4 3900	(2) D3 1500	(3) D2 1810		
45632	HD 8890 A	01 22.5	+28 46	02:27	02:33	11 53W		Fe/-	8-8
45633	HD 8890 B	01 22.5	+28 46	02:32	05 03	09 27E	+89 15	Fe/-	5-5
45634	HD 136202	15 11.2	-2 29	05 18	05 27	02 08W	+1 53	Fe/-	5-5-5
45635	HD 137909	15 21.7	+29 27	05 32	05 36	2 09W	+24 13	Fe/-	8-8

Spectr. Temp. 46°F Dome Temp./Hum. 40°F/79% Transparency Conditions . v. thin . . . layer . . . cloud

Focus 504

Spectr. Temp. . . . . Dome Temp./Hum. . . . . radium spot 40/min

172

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	IIaO	A		46°F 504	
30/300	2"	7.1 18.8	F6/G1	"	"	"	"	A	Ceph/Evans		good.
							"				
40/1[illegible]		~4.4	F[illegible]	"	"	"	"	B	BuCeph/Evans		str
40/1[illegible]		5.3	G2[illegible]	"	"	"	"	A	BuCeph/Evans		sl strong
[illegible]/60		"	"	"	"	"	"	B	BuCeph/Evans		v sl strong
40/35		3.8	G+[illegible]	"	"	"	"	A	[illegible]/Evans		v sl strong
40/35		3.3	F[illegible]	"	"	"	"	B	Cep 4/Evans SrdVel		Fair
[illegible]/30		2.9	F[illegible]	"	"	"	" *	A	Thr UMa	42°F 506	Fair
[illegible]/250		9.6	K0	"	"	"	"	B	KK UMa		
							"				
40/50	2-3	~2	F	"	"	150/1.7	" *	B	Asm Sp/KK	40°F 506	
[illegible]/170		8.6	F	"	"	150/1.3	" *	A	Asm Sp/KK		
[illegible]/171		5.6	F8	"	"	"	"	B			
40/30	1-2	3.9	F0p	"	"	70/.5	"	A			

173

Date Mar. 27/28 Fri/Sat Observers Crw Bts

$8^m 68^0$

Emulsion Batches: IIaOe 29070 - 24031

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
38F	focus test							Fe/-	20-20
45636	HD 66141	$7^h 57.^m1$	$+2°36'$	19:22	20 24			Fe/-	5-5-5
45637	π LEO	$9^h 54.^m9$	$+8°31'$	20:57	21:42		$8°12'$	Fe/-	5-5-
45638	R VIR	$12^h 33.^m4$	$+7°32'$	22:20	01:18			Fe/-	5-5-
38T	spot cal for	45636 -		15 min ISI	(1) 2900 (4)	(2) 4300 (3)	(3) 4200		
	V CVn	$13^h 15.^m1$	$+46°00'$	01:30	01:40 ABORTED			Fe/-	5
45639	S VIR	$13^h 27.^m8$	$-6°41'$	01:49	04 49	3 21 W	- 7 00	Fe/-	5-5-
45640	α' HER	$17^h 10.^m1$	$+14°30'$	05:05	05:10		$+14°31'$	Fe/-	8-8
		LST:	HA: RA-LST						

Spectr. Temp. ....48°F.... Dome Temp./Hum. 35°F/72% Transparency Conditions ....CLEAR.....1.74

Focus ....503.....

Spectr. Temp. ....47°F.... Dome Temp./Hum. 35°F/70%

radium spot 38/min

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				P.C	830/108	150/1.7	IIaOe	A		48°F 503	
400/150	5"	5.5	K2II	"	"	150/1.3	"	A	Std Vel		
400/1000		6.4	M2III	"	"	BS	"	B	M-STANDARD		
400/615		7.2	M3e-M6e	"	"	BS	"	A	CRW-MIRAS		
							"				
400/35		~8.0?	*(ER) M5e	"	"	"	"	B	CRW-MIRAS	*MISCLASSIFICATION! 40°F 506	
50/519		7.9	M6-M8e	"	"	"	"	A	CRW-MIRAS	broken 2 pieces	
70/70		~5.0	M5I6-II	"	"	"	"	B	M-STANDARD	39°F 506	

175 Sat/Sun

Date Mar 28/29 Observers (PJK) Waterhouse - Bts

8m 68° Emulsion Batches: IaDe 29070 - 24031
29070 - 27031

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
41F	focus test							Fe/-	20-20
45641	HD 71663	8 23 5	-2 11	19 20	20 40	0 27W	-2 23	Fe/-	5-5-5
42T ✓	spot cal for	45641	-42	15min 15V	① D4 3900	② D3 4300	③ D2 4810		
45642	HD 74874	8 41 5	+6 47	20 50	20 56	0 26W	+6 36	Fe/-	5-5 5
45643	HD 87822	10 02 5	+32 06	21 02	21 55	0 02W	+31 48	Fe/-	5-5-5
45644	HD 101177	11 33 5	+45 40	22 00	23 36	0 13W	+45 18	Fe/-	5-5-5
44T ✓	spot cal for	45643	-44	15min 15V	① D4 3900	② D3 4300	③		

Spectr. Temp. 50°F Dome Temp./Hum. 48°F/73% Transparency Conditions ... hazy, thin cloud 176

Focus 503

Spectr. Temp. 50°F Dome Temp./Hum. 49°F/72%

radium spot 3K/min

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	IIaJ	B		50°F 503	cont'd
400/350	34	6·6	F0	"	"	"	"	"	Waterloo		grey? slight
							"				
46/46		6·8	F2	"	"	"	"	A	"		fine
400/350	3	6·7	F5	"	"	"	"	B	"	New box of plates	fine
190/190		6·9	G0	"	"	"	"	A	"	50°F clouds	slight
							"				

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Date 31/1. Mar/April Observers Myd/Tu

Emulsion Batches:
IIa-e 29070-27031
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45646	E Hya HD 71874	8 41.5	+6° 47	20 25	20 32	0 20 W	"	Fe/—	7-7
45645T	Spot Calib	for	45645		15 min	@ 15V	L4 3900	D3 500	D2 4810
45646	35 ko HD 89010	10 15.5	+23° 36	21 22	23 53	2 00 W	+23 36	Fe/—	5-5
45646F	Focus Test					"	"	Fe/—	15-15

Spectr. Temp. 153°F Dome Temp./Hum. 147°F/27% Transparency Conditions Hazy/Clear 1.28

Focus 502

Spectr. Temp. 49°F Dome Temp./Hum. 141°F/10%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30/120	2-3"	4.1	G0	3C	830/.68	120/.5	IaDe	A	Solar Type	Calc 6765	fine
							"			Calc 5875	
100/196	4"	6.5	G2	3C	830/.68	120/.5	"	B	Solar Type		5 cm
				"	"	120/1.0	IIaO	B			OK

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098 ore 05031 - 05051 Emulsion Batches:

Date 2/3 April 1981 hw/fk Observers KK-TH-GW

IIaDe 29070 - 29021

HJE G4143.031.02

2½ hrs @ 65°C baked H₂

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
45647F	Focus Test							Fe/—	5-5
45647	HD 62509	07 39.2	+28 16	19 28 30	19 31.5	00 15W		Fe/—	7-7
45648	HD 62509			19 39	19 40	00 25W		"	"
45649	HD 62509			19 42	19 43	00 28W		"	"
45650	HD 62509			19 46	19 47	00 32W		"	"
G1	"	Grating	illumination	19 45 Test	20 20				
G2	"	07 39.2	28 16	Comparison - slit w/ both lenses				Fe/—	120s
G3	"	Star + Slit							
G4				Comparison - Slicer				Fe/—	120s
G5	"			21 15					
45651F								Fe/— Ne/—	15-15
45651	HD 89449	10 14.3	+19 59	21 55	22 04	00 13W		Fe/— Ne/—	7-7 14-14
45652	HD 89449		"	22 09	22 20	00 40W		Fe/— Ne/—	7-7 14-14
45653	"	"	"	22 36	22 47	00 56W		"	7-7 14-14
45654	HD 84441	09 40.2	+24 14	23 06	00 09	02 53W	+23 53	Ne/—	30-30

Spectr. Temp. 54.5 Dome Temp./Hum. 50°F / 62% Transparency Conditions ... sl hazy ... 100

Focus 502

Spectr. Temp. ... Dome Temp./Hum. ... / ... Radium 40/35

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	150/110	IIaF	A			Cont Red
40/≥50?		2.15	KO II	BC	830/.68	150/110	IIaO e	A	Std Vel		Fine
40/37	2-3'					BS	IIaO e	A		I = 502 1 inch on slit	fine
40/37	"	"	"	"		BS	IIaO e	A		F = 505	fine
40/34	"	"	"	"	"	BS	IIaO e	A		F = 499	fine
40/100	2"	"	"	"	"	BS	IIaF				
		"	"	"	"	250μ	IIaF				
40/100						250μ	IIaF				
							IIaF				
							IIaF				
				RC	1200/.7	RS	098 02E	H		T = 53°F Cal 496	Cont Sl fog
40/25		5.3	KC II	RC	1200/.7	RS	098 02e	A	Std Vel.	V filter clear-hazy in exp meter Hg-gnd on Fe strong	
40/25	3"	"	"	"	"	150/.7	"	H	"	hazy-thin hazy-gnd	
40/25		"	"	"	"	RS	"	B	"	hazy	
40/209	3-4'	3.0	KC II	"	830/.9	150/.5	HIEb	B	I.P. Sept	V filter broken	v.sl wk

Date 2/3 April 1981 Thur Fri cont Observers Gw - TN

Emulsion Batches: [illegible]

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45654T	Spot Calib	for 51-	53	15m + [illegible]	15V D3 4810	7V1 Hα	7V 02 5450		
45654F	Focus Test					0	0	FeNe 5-1	30-[illegible]
45655T	spot calib	for 45654-			7½V	D4 10 min 7680	D3 30 min 5464		
				00 39					

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 182

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 45°F/88% ..

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
							098-02E				
				RC	830/19	150	IIIE	B	T = 51°F	Set 496	s! red
										why is temp change [illegible]	

183 Rubidium

Date 1981 Apr 6-7 11 pm TWPS Observers Ly-Tn / Ru-Th

8m 6s Emulsion Batches:
4m 6s ..Da.0-E..2.9030—2.7031
4m 6s II ..098-02E..09231—2.7031
4m 6s II IIa.0-2E....29070—.06041

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45655	HD28205	4 21.9	+15 22	19:30	20:25	1 42W	+15 39	Fe/-	5-5-5
45656	HD94118	10 46.7	+46 20	20:35	22 20	0 13W	+45 59	Fe/-	-55
45656T	Spot Calib	45655	-45664		15 min @ 15V	D4 3900	B3	L	
45657	HD62044	7 37.1	+29 08	22:24	22:37	03 39W	+29 01	Fe/-	7-7
45658	HD72208	8 26.5	+10 09	22 42	23:24	03 35W	+10 00	Fe/-	5-5-5
45659	HD118216	13 30.3	+37 42	23:30	23:54	00 57E	+37 23	"	5-5-5
45660	"	"	"	23:55	00:11	00:34E	"	"	5-5-5
45661	"	"	"	00:15	00:29	00 1[illegible]	"	Fe/- Ne	7-7 10-10
45662	"	"	"	00:38	0:44	00 09E	"	[illegible]/-	[illegible]
45662F	Focus Test							F/-	25-25
45663	HD115521	13h 12.6	+6° 06	0h 57	01 17	00 45W	+5° 42	Fe/-	7-7
45663T	Spot Calib			15min @	15V B3 4E10	7V 31 1m	7V B2		
45664	HD157482	17h 18.4	+40° 04'	01 21	2:07	2 29E	+40° 05	Fe/-	5-5-5
45665	HD186688-SUGAS	19h 40.6	+29° 01	02 16	4:38	2h 21E	+29° 17	Fe/-	4-4-4
45665T	Spot Calib Fe	45660-67		15 min @	15	D4 3900	B3	L	

Spectr. Temp. 45°F ..... Dome Temp./Hum. 38°F / 66% Transparency Conditions ... Good 1.84

Focus ..... 503 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... / .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/102	2-3"	7.9	F8V	BC	1200/-.025	BS	IIaO-e	A	Hyades Std-Cnv		weak
100/310	"	7.1	A2	"	"	"	"	B	Sp Bin - Ly		fine
							"			[illegible] ?	
10/68	2"	4.1	K1III	BC	1200/-.025	BS	IIaO-e	A	Hick - Ly		fine
400/240	2-3	6.5	A0	"	"	"	"	B	Sp Bin - Ly		v wk
40/75	3	5.2	F2IV	"	"	"	"	A	RSCVn - Ly	Set 504 T=40?	
40/53	"	"	"	"	"	"	"	B	RSCVn - Ly		fine Fe wk
40/32	"	"	"	BC	1200/.7	RS	098-e	A	RSCVn - Ly	V of Hercules 39°F 506 (Clear meter)	
40/30	"	"	"	"	"	"	"	B	RSCVn - Ly		sl wk
				"	1200/.7	"	"	A			v sl blue
20/69	2"			"	1200/-.025	BS	IIaO-e	B	std vel	(Clear meter) 39.5°F 504	fine
							098+2E				
200/302	3"				1200/-.025	BS	IIaO-e	A	Bln		
200/340	2-3"	6.4-7.1	V	"	830/.68	BS	IaO-e*	B	Cyg/Evans	33°F 506	
							"				

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Emulsion Batches:

Date ... Apr 6-7 1900 ... Observers .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45666	HD176155 = FF Aq	18h 53.8	+17 14	4:41	05 04	1h 09 E	17° 26	Fe/-	4-4-4
45667	HD176295 = 41 Cyg	20h 25.3	+30° 21	05:07	05 14	2h 30 E	+30 23	F/-	4-4-4

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Photometric ..... 186.

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 0°F / 77%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/ 70	1-2"	5.85 →0.90	CFS- cf9	BC	830/68	BS	IIa-E*	A	Burbidge		
0/ 70	2"	9.93	FS II	BC	"	"	"	B	Burbidge/Evans		~ 3' sec

187

Date . Apr. 7-8. Tues-Wed. Observers . Gies.-TM.....

Emulsion Batches:
...IIaD-e...29070-06041.
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45668	HD 36576	$5^h 27.^m7$	+18° 28′	19:23	19:45	$3^h 0^m$ W	+18° 38′	Fe/—	5-5-5
45669 J	HD 37657	5 35.1	+43 00	19:52	21:31	$4^h 37^m$ W	+43° 09′	Fe/—	5-5-5
45669T	Spot cal.	for 45668			15 min @ 15V	D4 3900	D3 4390		
45670	HD 45995	6 25.6	+11 19	21:34	22 15	4 32 W	+11° 16′	Fe/—	7-7
45671	HD 97991	11 11.1	−2 55	22:18	00:04	1 34 W	−3 16	Fe/—	5-5-5
45672	HD 149363	16 29.1	−5 56	00:08	03:07	0 37 E	−5 58	Fe/—	5-5-5
45672T						"	"	Fe/—	15-15

Spectr. Temp. 1.52°F..... Dome Temp./Hum. 48°F/58% Transparency Conditions ..Fine, windy.....188

Focus .....502.....

Spectr. Temp. .1.50°F..... Dome Temp./Hum. .45F/..71.%.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/35	1-2"	5.71	B2IIIa	RC	830/68	BS	IIaO-e	A	Runaway*		v sl. stw.
00/175	1-2	7.22	B3Vne	"	"	"	"	B	Runaway*		v sl stw.
							"				
00/80	2-4'	6.04	B2Vnne	"	"	"	"	A	Runaway*	Airplane!	sl wk
00/182	2"	7.18	B2II	"	"	"	"	B	Runaway*	51°F broken 2pcs	
00/185	3'	7.76	B0.5V	"	"	"	"	A	Runaway*	cloud broken 50°F 1pc *	
				"	"	"	"	B			

* had to be fixed separately
col. no good for twin plates

189 – 1 f-N Blue mbsc
– 0960 Sky 7 steps in 30c

Date 17 Apr. 9/10 Thurs Fri 81 Observers KC:Ri/Ley:Ri

29 3+

4½ʰ 68° Emulsion Batches: IIaFh –08041 3ʰ 65°C 8% H₂
IIaOe 29070 – 07041
5ʰ 68° IIaJ+D 07119 – 27021 / 13270

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45673	HD 62509	07 39.2	+28°16′	19:46	19.47	01ʰ10W?		Fe/—	7-2
45674	"	"	"	.49	19 51	01 14W		Fe/—	2-2
45675	"	"	"	:53	54	01 17W		Fe/—	7-7
45676	"	"	"	20:07	20:08	01 21W?		Fe/—	7-7
45676F								Fe/—	15-15
G	Grating illumination 103F Blue shift comparison							Fe/—	120 120
45677	"	"	"	20 29	20:35	01 48W		Fe/—	30-30
45678	"	"	"	20:40	20 45	01 58W		Fe/—	30-30
45679	"	"	"	20:50	20.58	02 11W		Fe/—	30-30
45679F								Fe/—	30 30
45680	HD 66751	7 59 9	+70° 00	21 14	22 16	03 04W	+69°49′	Fe/—	5-5
45681	HD 122742	13 58.6	+11 16	22 22	23 15	01 49E	+10°58	Fe/—	5-5
45682	HD 137909	15 23 7	+29 27	23:21	23:26	03ʰ04E		Fe/—	7-7
45683	HD 124897	H 11.1	+ 19 42	23:40	23.42	01 35E		Fe/—	15-15
45684	"	"	"	23:46	23 48	01 33E		Fe/—	15-15

Spectr. Temp. ...56°F..... Dome Temp./Hum. 10°C..60%.% Transparency Conditions 1.8Q

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... Exp MTR TEST 40/35

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/35		2.15	KoIII	BC	830/.68	BS	IIaO-E	A	Std Vol	F500 3	sl strong
40/36	4"	"	"	"	"	BS	"	B	"	F 500	"
40/35		"	"	"	"	BS	"	A	"	F 497	"
40/35		"	"	"	"	BS	"	B	"	F 500	sl. strong
						BS	"	A	"		v s' blue
						BS					
40/150		"	"	"	1200/.7	BS	IIIaF b	A	"	V in meter	strong!
40/150		"	"	"	"	RS	IIaF b	B	"		comparison too strong!
40/150		"	"	"	"	120/.7	IIaF b	A	"		
					1800/.6	120/1.0	IIIaJ	B		T 540 F 501	sl blue
40/297		6.48	dF8	BC	1200/-.025	BS	IIaO-E	A	Asm Sp/KK	up to clock	green
40/350		6.8	G8V	BC	1200/-.025	BS	IIaOe	B	Asm Sp/KK	.28	V blue
40/35		3.9	F0I	"	1200/-.025	BS	IIaOe	A	Asm Sp/KK	.55	
50/60		1.2	K2IIb		1800/.3	BS	IIIaJe	B	Std Vol	T51F 503	strong
50/60		"	"		1800/.0	BS	IIaF b	A	Std Vol	V filter in meter	strong comp. sl strong

191

Date Apr. 9/10 cont... Observers H.R./L.-R.....

Emulsion Batches:
Tau-E 2707-0704.1 18 205
098-02.E 0603.1-2003.1 52 182
4½" 68° [illegible] 3

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
45684F	focus test							Fe/—	30-30
45685	HD 118216	13 30.3	+37 42	0:00	00:26	00 11E	+37 20	Fe/—	5-5-5
45685T ✓	spectral tri plates	45673-76, 80-82, 86-			15min @	15Volts	D4 D3 3900 4300	D2 4500	
45685T2 ✓	spectral tri plates	45677-79, 84			15min @	D4 15U 4810	D2 7U Hd	D3 7U 5450	
45686	HD 118216	13 30.3	+37 42	0:27	00:49	00 12W	+37 20	Fe/—	5-5-5
45687	"	"	"	0:55	01:10	00 32W	"	Fe/— Ne/—	7- 10
45688	"	"	"	01:11	01:27	00 49W	"	Fe/— Ne/—	2 10
45689	HD143313	15 54.6	+25 52	01:36	05:07	02 06W	+25° 41	Fe/—	5-5-5
45689T1 ✓	spectral tri plates	45683			15min @	D4 17.5U 3900	D4 15U 4300	D4.5U 4800	
45689T2 ✓	spectral tri plates	45687+88			15min @	D3 15U 4810	D1 7U Hd	D2 7U 5450	
45689F	focus test					02 07W	+25°41	Fe/—	15-5

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 192

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 40°F 73%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1800/.0	BS	IIaFe	B			sl. red
40/75	4	5.3	F2IV	"	1200/-.025	BS	II20	A	RSCVn - Ly		
							IIaO-E				
							IIIaFe				
40/81		5.3	F2IV	BC	1200/-.025	BS	IIaOe	B	RSCVn - Ly		
40/30		"	"	"	1200/.7	RS	098e	A	"	V filter in exp. meter T=50°F F=503	
40/32		"	"	"	"	RS	098-02e	B	"		
300/450		9.54	45	"	830/.68	BS	IIaOe	A	H+K -Ly	T=49°F F=502	sl wk
							IIIaJ-E				
							098-02E	B		T=46°F F=502	

193

Date Apr. 10/11 Observers Cow-Ri

Emulsion Batches: Tri-E 29070-07041 18 200

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45690	HD 84346 R LMi	$9^h 39^m.6$	$34° 58'$	19:37	20:40	$00^h 04^m E$	$+34° 38'$	Fe/—	5-5
45690T ✓	spectral tr plates	45690				15min@	150volts 3900	D3 4300	D2 48:0
45690F	focus test							Fe/—	15-15

Spectr. Temp. ....58°F.... Dome Temp./Hum. ..... Transparency Conditions ...THIN CLOUD COVER 194

Focus .....501.....

Spectr. Temp. ..... Dome Temp./Hum. 57°F / 55%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5-5 7:00/180	2"	8-8	M7+M8e	B.C.	830/0.68	150/.3	IIaO-E	A	CRW-MIRAS	CLOUDED OVER ⇒ OPTICALLY THICK!	700 wl
							IIaO-E				
				B.C.	830/.68	150/1.0	IIaO-E	B		T=59°F 501	

195 2034-21:10 tour ~75 people Py looked at Jupiter.

Date Apr 11/12 Sat/Sun #1 Observers Ly-Ri

Emulsion Batches:
IIa0e 29070-07041 22 20
IIaDe 02100-10041 14 185
098-e 06031-20031 42 20

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
45691F	focus test					00 07W	+16 25	Fe/-	15-15
45691	HD47105	06 36.4	+16 25	19 50	19 52	02 18W	+16 27	Fe/-	7-7
45692	✓CM HD61421	07 34	+5 29	19 56	19 57	01 22W	+05 20	Fe/-	7-7
45693	HD56986	07 14.1	+22 10	20 01	20 12	01 57W	+22 03	Fe/-	7-7
45694	HD99028	11 18.7	+11 05	20 19	20 25	01 55E	+10 40	Fe/-	7-7
45695	HD121370	13 49.9	+18 54	20 30	20 34	04 16E	+18 32	Fe/-	7-7
45696	HD62044	07 37.1	+29 08	21:14	22 25	03 46W	+20 59	Fe/-	5-5
45696T1 ✓	spot cal for plates 45691-92				15mm @ 15 Volts		D4 D3 3900 4300	D2 90	0
45697	HD94118	10 46.7	+46 20	22:32	01:12	03 23W	"	Fe/-	5-5
45697T1	spot cal for plates	45693-	45699,		15mm @	15 Volts	D4 D3 3900 4300	D2 90	0
45698	HD118216	13 30.3	+37 42	01:16	01:50	01 19W	+37 18	Fe/-	5-5
45699	"	"	"	01:51	02:29	01 57W	"	Fe/-	5-5
45700	"	"	"	02:38	03:04	02 33W	"	Fe/- Ne/-	7-7 10-10
45701	"	"	"	03:06	03:41	03 18W	"	Fe/- Ne/-	7-7 10-10
45701F	focus test					03 19W	"	Fe/-	25-25
45701T ✓	spot cal for plates	45700 & 45701			15mm @		D3 150 4810	D1 70 Hd D2 70 5450	

Spectr. Temp. 62°F Dome Temp./Hum. 56°F 66% Transparency Conditions light cirrus 196

Focus 498

Spectr. Temp. Dome Temp./Hum. bright & active Aurora

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/-.025	BS	IIaOe*	A		62° F F=498	
20/20	3	1.9	A0IV	"	"	"	" *	B	Asm - kK	.80	fine
20/20	3	0.8	FSIV	"	"	"	" *	A	Asm-std-kK	.85	fine
50/70	3	3.9	F0IV	"	"	"	"	B	Asm - kK	.24	
50/70	3	4.3	F2IV	"	"	"	"	A	Asm - kK	62° F .25	good
40/36	3	3.3	G0	"	"	"	"	B	Asm - kK	.36	good
30/150	3-4	5.3	K1III	"	"	"	"	A	H+K - Ly	60½ set 498	good
							IIaO-E*				
300/250	3	7.1	A2	BC	1200/-.025	BS	IIaO-E	B	SpBi - Ly	intermittent clouds aurora 59°F 499	visible
							IIaO-E				
40/77	3-4	5.3	F2IV	BC	1200/-.025	BS	IIaO-e	A	RSCVn - Ly	55°F set 500	fine
40/68	3-4	"	"	"	"	"	"	B	"		fine
40/30	4	"	"	"	1200/.7	RS	098-e	A	"	plate No 100 53°F set 502	
40/30	"	"	"	"	"	"	"	B	"	patchy cloud	
					1200/.7	RS	098-e	A			
							098-e				—

197 ±2

Date Apr. 11/12 CONT'D. Observers Ly-Ri

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
45702	HD137909	15 23.7	+29 27	03:50	04:16	01 50W	+29 12	Fe/-	7-7
45702F	focus test.					01 50W	+29 12	Fe/-	15-15
F2	focus test							Fe/-	2-30

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ....V. V. Poor ..... /98

Focus .....

Spectr. Temp. ..50° F..... Dome Temp./Hum. 40° F 75% RH

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/24		39	FOp	BC	1200/.on	BS	IIaOe	B	ASM - KK	50°F set 501 .26	good
				"	"	"	IIaOc	A		CLOUD	v sl blue
				"	1800/-.? (max CW)	BS	IIaFb	A		50°F set 500	sl red

199 Tues/Wed.

Date April 14/15 Observers Gis - Ri

8m 68s Emulsion Batches: Tech-E 02100 - 10041 15205

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45703	HD 97991	11h 11m.1	-2° 55'	21:51	23:21	01h22mW	-3° 20'	Fe/—	5-5-5
45703T ✓	spectral fn plates	45703-			15min @ 150volts	D4 3900	D3 4300	D2 4810	

Spectr. Temp. +44°F ..... Dome Temp./Hum. +34°F / 75% Transparency Conditions ..... Intermittent clouds 2.000
windy!

Focus ... 505 .....

Spectr. Temp. ..... Dome Temp./Hum. 40/38

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/192	4-5"	7.12	B2I	BC	830/.68	BS	IIaO-e	A	Runaway *	+44°F Clouds 505	good
							IIaD-E				

201 Wed-Thurs

Date April 15/16 Observers Tn - Are

5m 68°

Emulsion Batches: 098-02E 05021 - 100-41 25 R

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45704	HD31964	04 54.8	+43 41	19:42	19:45	≈3 0 W	43° 54.7	Fe/—	6 - 6
45705	HD 7927	1 18.8	+68 08	20:00	20:32	8:35 W	68° 09.9	Fe/	6 - 6
45706	HD 8890A	1 22.5	+88° 46	20 53	21 05	≈9 0 W	89 09	Fe/	6
45706F	Focus Test							Fe/—	14
45707	HD 8 4441	9 40.7	+20 19	21 21	21 29	0:57 W	23° 53	Fe/—	6
45707Y	Spot Calc	for 45704-07			15 min @	15° 03 4810	7 UDI H	7V Dv Fe/D	
~~45708~~	~~HD161796~~	~~17 42.5~~	~~+50 05~~	~~23 06~~	~~1:15~~	~~3:0 E~~	~~51° 05~~	1o/—	1-1 9-1

Spectr. Temp. ...42°F..... Dome Temp./Hum. 377 / 67% Transparency Conditions ...Good - Cloudy...202

Focus .....5.05.....

Spectr. Temp. ..... Dome Temp./Hum. 307 / 80%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10/18	3"	V= 2.99	A&Ia	BC	1200/.7	150µ/.5	098-02E	A	Arc Prog.	* w.k. v.s. Hor	good - comp str.
10/22	3"	V 4.95	FOIa	BC	1200/.7	"	"	B	Arc Prog.		fine - comp obs
10/18	3"	V 2.5	F&Ib	BC	1200/.7	"	"	A	"		fine -
				"	"	150/.7	"	A			good
10/24	3"	V= 2.04	GI F&b	"	"	150/.7	"	B	Sky Area		fine - comp sl sky
							"				
10/23	4"	7.27	F8	"	"	150*/.5	"	A	Arc Prog	Clouds! not very good? prob blank discarded / Tu	blank

203

8m 68° Emulsion Batches: IIaO-E 07100 ... 17100

Date Apr. 16/17 Thurs-Fri Observers Ly-Tu/

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45708	HD62044	07 37.1	+29 08	19:44	19:59	01 40W	+28 54	Fe/-	8-8
45709	HD 94118	10 46.7	+46 20	20:06	21:11	00 16E	+45 52	Fe/-	5-5-5
45710	HD 118216	13 30.3	+37 42	21:19	21 56	02 15E	+37 14	Fe/-	5-5
45710T	Spot Cal	for 45708	-	15 min	@ 156	124 3900	D3 4300	D2 4210	
45710F	focus					02 12E	+37 14	Fe/-	15-15

Spectr. Temp. 53°F Dome Temp./Hum. +50°/60% Transparency Conditions cirrus 3.24

Focus 501

Spectr. Temp. ..... Dome Temp./Hum. /

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/101	1-2	5.3	K1 II	BC	1200/-.025	BS	IIaO	A	H+K - Ly		
100/300	1-2	7.1	A2	"	"	"	"	B	SpBin - Ly	Fe sl wk sl wk	
200/236	2-3	5.0	F2 IV	"	"	"	"	A	RSCVn - Ly	c'ondo	
							"				
				BC	1200/-.025	BS	IaO	B		53°F sel 501	cont sl wk

Exp.

205

SAT-SUN

Date Apr. 18-19. 81 Observers Ly.-To./Bl.-Th.

8" Emulsion Batches:
IIaO-G 02100 - 14014
5" IIIaJ-E 07119 - 06031
098 02E 05031 - 10041

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45711F	Focus Test					0	+16°	Fe/—	
45711	HD 81797	9 22.7	−8 14	19 33	19 38	00 18E	−8 34	Fe/—	7-7
45712	HD62044	7 37.0	+29 07	19 42	20 04	01 52W	+28 56	Fe/—	7-7
45713	HD66751	7 59.9	+70 00	20 07	21 31	02 53W	+69 47	Fe/—	5-5-5
45713T	Spot Calib for	45711-15,	19-22.		15m @ 15V	D4 3900 D3 4300	D2 4810		
45714	HD 116216	13 30.3	+37 42	21 38	22 16	01 46E	+37 16	Fe/—	5-5-5
45715	HD143313	15 54.6	+25 52	22 22	00 01	02 24E	+25 37	Fe/—	5-5-5
45716	HD112028	12 48.3	+83 58	00 12	02 23	03 08W	+83 30	Fe/—	12-12½
45716T	Spot Calib for	45716	15m @	D4 15V 3900	D4 15V 4390	D4 15V 4810			
45717	HD112028	12 48.3	+83 58	02 33	03 13	03 53W	+83 30	Fe/— No/—	4-4½ 9-9-
45717T	Spot Calib for	45717-18.		15min @	15V D3 4810	70 D1 4450		TV #3	
45718	HD200120	20 56.9	+47° 08'	03 18	03 46	03 42E	+47° 26'	Fe/— No/—	4-4 9-9
45719	HD200120	20 56.4	+47° 08'	03 50	04 03	03 23E	"	Fe/—	5-5-5
45720	"	"	"	04 04	04 16	03 10E	"	"	5-5-5
45721	"	"	"	04 19	04 29	02 43E	"	"	7-7
45722	"	"	"	04 30	04 43	02 44E	"	"	7-

Spectr. Temp. ..48°F..... Dome Temp./Hum. +41°F/74%.. Transparency Conditions ...good...cloudy....20.6

Focus .....502.....

Spectr. Temp. ..38°1=..... Dome Temp./Hum. +2°F/94%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/-025	BS	IIaO	A			rightson
40/35	3	2.2	K3 II-III	"	"	"	IIaO-e	A	std vel		slwk
200/305	3-4	5.0	K1 III	"	"	"	"	B	H+K-Ly		slwk
150/150	4-5	6.6	dF8	"	"	"	"	A	Aem-KK		slweak
							"				
390/390	4-5"	5.0	F2 IV	BC	1200/-025	BS	IIaO-e	B	RScVn-Ly	+44°F Set 503	
174/174	4"	9.5	K5	"	830/.68	"	"	A	H+K-Ly	+43°F Set 505	weak
400/400	5-7"	5.28	B8	BC	830/.68	BS	IIIaJE	B	Shell-Bln	Set 506 Reversed cloud	fine
							IIIaJE				
400/400	5"	5.25	B8	BC	1200/.7	BS	098-02E	A	Shell-Bln	T=40° Set 506 GG13 filter?	good
						1	098-02E				
90/90	5"	4.51	B1e	BC	1200/.7	BS	098-02E	B	Be-Bln	cirr	slweak
30/30	3"	4.51	B1e	BC	830/.68	BS	IIa-01	A	Be-Bln	Set 506 T=39°F	fair
35/35	3"	"	"	"	"	"	"	B	"		Fair
35/35	3	"	"	"	"	"	"	A	"		2nd
36/36	1	"	"	"	"	"	"	B	"		Fair

207 Mon-Tues #1

Date Apr. 20-21. 81 Observers Wk-Tu / Ow-Tu

Emulsion Batches:

4m 68° IIaD 11031 - 12031 20 177

10m 65° IIaO-G 0721 - 1404 16 203
4m 65° 2415

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
45723 ✓	HD 89449	10h 14m.3	19° 59′	20h 48m	20h 52	0h 12m W		Ne/ND	5-5
45724 ✓	HD 92588	10 36.3	-1 13	21 06	21 18	0 15W		Ne/ND	5-5
45725 ✓	"	"	"	21h 26m	21h 38m	0 35W		Ne/ND	5-
45726 ✓	"	"	"	21h 45m	21h 58m	0 55W		Ne/ND	5-5
27 ✓	HD 102870	11 45.5	+2° 20′	22h 14m	22h 23m	0 10W		Ne/ND	5-5
28 ✓	"	"	"	22 31m	22h 34m	0 21W		Ne/ND	5-5
29 ✓	"	"	"	22h 40m	22h 42m	0 29W		Ne/ND	5-5
30 ✓				23h 00m	23h 01	0 48W		Ne/ND	10-10
31 ✓	"			23h 09	23h 12m	0 59W		Ne/ND	10-10
32 ✓	"			23h 14	23h 25m	1 12W		Ne/ND	10-10
33 ✓	"			23h 35m	23h 40m	1 27W		Ne/ND	20-
45733T	Spot 5½ for	45723-30		15m @ 7V		D2 5450	D2 5450	D2 5450	
34	HD 102870	11 455	+2 20	23h 50m	00 11			Ne/ND	20-20
45735	HD (G3096-Miller	12h 51.9	+26° 4	00h 37	02 15	02 84E	+25°03	Fe/-	5-5
45735T	Spot 6½ for	45735-37		15m @ 4V		D2 3900	D2 4300	D2 4810	

Spectr. Temp. ..... Dome Temp./Hum. 13°F/..... Transparency Conditions ... photometric ... 20%

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..../.....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/10	2"	5.3	F6 II	BC + IT	1200/.475	150/.5	II a D	1	STD Vel	"V" filt.	exp fine
200/10	2"	6.4	sg ft/	"	"	"	"	1	"	+ Blue vs red coil ratio	"
200/10+	2	"	"	"	1200/.200	150/.5	"	1	"		
200/10-	2	"	"	"	1200/0.0	"	"	1	"		
00/80	2"	3.61	F8 II	"	1200/0.0	"	"	1	IWL/TEST		strong
00/-0		"	"	"	1200/.200	"	"	1			
00/20	"	"	"	"	1200/.475	"	"	1			sl strong
00/20				RC + IT	1200/.675	"	"	1			fuzzy sl strong
00/40	"	"	"	"	1200/.200	"	"	1			sl str fuzzy
00/80	"	"	"	"	1200/.000	"	"	1			sl strong
200/100				"	1200/.475	"	2415 f.l.	1			sl str.
							II a D				
00/200					"		2415 f.l.	1			strong
/L.L				BC	830/.ST	BS	III a E	A	Cont/Abs	33°F Features	strong
							IV a E				

209 Mon Tues #2 Cont

Date Apr 20-21/81 Observers Kin-Tu

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45736	HD186688 = SVS 5	19h 40.6	+29°01	02 18	04 45	01 19 E	+29° 12	Fe/—	55—
45737	HD186986	17 38.5	+4 37	04 49	04 51	00 49W	+04 34	Fe—	7—
45737F	Focus					"	"	"	17 1/2
45737T1	Calibration [illegible]	[illegible]	[illegible]	[illegible]	7 1/2 V	D3 30 min Σ464		[illegible]	
45737T2					"	"			
45737T3	Instrumental profile test							Hg	6
T4	"							Hg	5 - 10
T5	"							Hg	5 - 15

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions 2/10

Focus 508

Spectr. Temp. ..30°F..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
100/442	4"-3"	7.7	G1	Bc	830/.68	BS	IIaO-e	B	Aph/Evans	T=31°F	Fine
42/46		3.9	1200 III	"	"	"	"	A	"		Fine
				"	"	"	IIIaF	B		T=22°F spectrograph ~~dis~~ discarded	no red comp
		Note	There	will	be	3	blanks	in	Exp	Box	
							(a safety measure. Not for wts)				
										.10 .78	
										.07 .67	
				Bc	830/.68	BS	IIaOe	A	T=41° F	504	Fine
				"	"	150/.5	"	"			ok
				"	1200	150/.5	IIIaFb	A	"	"	blotchy fog

211 Sat/Sun

Date 25/26 April 1981 Observers KK-TN

10m 60s

Emulsion Batches:
IIaD-e 02100 - 14041262
IIa-O*e 02150 - 21611252

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
45738	HD 121370	13 49.9	+18 54	0 19	0 22	0 25 W	+18 35	Fe/—	7-7
45739	HD 122742	13 58.6	+11 16	0 25	1 24	1 18 W	+	Fe/—	5 5
45739T	Spot Calib	for 45738-39			15 min @ 15V	D4 3000	D3 4320	D2 4810	
45740	HD 130948	14 45.8	+24 20	01 28	02 11	1 20 W		Fe/—	5-5
45741	HD 137909	15 23.7	+29 27	02 14	02 18	0 48 W		Fe/—	7-7
45742	HD 161096	17 38.5	+4 37	02 22	02 25	1 20 E		"	7-7
45743	HD 172167	18 33.6	+38 41	02 29	02 29	2 10 E		"	7-7
45744	HD 173739	18 47	+59 29	02 50	04 43	0 01 W	D2	Fe/—	5 5
45744T	Spot Calib	for	45740-	44	15 min @	15V D4 3460	4300	D4 4810	

Spectr. T
Focus...
Spectr. T
Exp. Mtr.
40/50
93

Spectr. Temp. 44°F Dome Temp./Hum 37°F / 90% Transparency Conditions Clearing 0.4 2.12

Focus 503

Spectr. Temp. ____ Dome Temp./Hum. 34°F / 92%

New D19

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/50		2.8	GO	BC	1200/.025	BS	IIaO-e	A	Asm KK		fair
400/450		v= 6.21	G8V	"	"	"	"	B	"	D=.20	good
							"				
400/450	3"	v= 5.92	dG2	"	"	"	IIaO-e*	A	"	Spec T=43°F D=.25	good
40/35		39	FOp	"	"	"	"	B	"	D=.40	fine
40/40		39	K2III	"	"	"	"	A	std vel		good
40/32		v= 6	AOV	"	"	"	"	B	Fe proj		v sl str
3000/93	3"	4.10	dM5	"	830/.65	isc	"	A	Asm KK	T=42° F=.505 twilight	weak
							"				

213

Date Wed-Thurs April 29/30 1981 Observers Are - Ri

5h 68° Emulsion Batches: 096-02E 05031-10041 44 231

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45745	HD8290	1 22.5	88° 46'	22h 51m	22h 55m	11h 10m W	+89° 16.8	Fe – / De –	5 / 12
45746	HD 161796	17 42.5	+50°05	23 05	1h 49	1h 40m E	+49° 59.1	Fe / Ha	5-2 / 8-8
45746 T1 ✓	optical fa plate	45745-			15 min @	15U D3 9810	7U D1 Ha	7U D2 5450	
45747	HD 164136	17 59.7	30° 12'	1h 55	2 19	0h 44m E	+30° 06.8	Fe / – / Ne / –	3-0 / 8-16
45748	HD180583	19h 12.0	27° 45	2h 24	3h 53	1h 07E	+27° 51.0	Fe / – / Ne / –	3-3 / 8-8
45749	HD 217476	22h 55.	56° 25	3h 59	4h 26	4h 18 E	56 17.8	Fe / – / Ne / –	3-3 / 8-8
45749F1	focus test							Fe / –	18-18

Spectr. Temp. ....53°F..... Dome Temp./Hum. ....44°F 94%..... Transparency Conditions ....~~fair~~.....21.4

Focus .....502.....

Spectr. Temp. ..... Dome Temp./Hum. ....~~40°F~~ 87%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/18	3"	2.5	F8I6	BC	1200/.7	*150/.5	098-02E	A	Ave Prog	*"V" FILTER ON	fine
300/300		7.27	F8	B.C.	1200/.7	150/.5	098-02E	B	"		good
							098-02E				
00/111		4.98	F2II	BC.	1200/.7	150/.5	098-02E	A	"	T 520°F F 503	fine
07/200	3-4	5.92	F6IV6	BC.	1200/.7	150/.5	098-02E	B	"		fine
00/220		4.99	G0Ia	BC	1200/.7	150/.5	098-02E	A	"		fine
				B.C.	1200/.7	150/1.0	098-02	B		T 470°F F 503	

215 Thurs-Fri

Date April 30-MAY 1 1981 Observers H.K.-R.I // B.A.-R.

5098-02E 9m
05031-10041 5m
46 228 9m

Emulsion Batches:

IIaF-	02100-21091	21 216
IIIa-J-E	07119-06031	47 3+
IIIa-E	02100-21091	22 206

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45750	HD81797	9 22.7	-8 14	20 02	20 06	00m 5tw		Fe/—	7-7
45750F	focus test							Fe/—	15-15
45751	HD81797	9 22.7	-8 14	20 13	20 24	01m 6w	-08 32'	Fe/—	15 15
45752	NGC 2392	7 27.7 1975	+20 58 1975	20: 38	20: 55	03m 5w		—	—
45753	NGC 2392			20: 56	21: 01	03m 5w		—	—
45754	"			21: 18	21. 19	04 10w		—	—
45755	"			21: 26	21: 46	04 37w			
45756	HD124752A	14 10.3	+68 03	22: 31	22 52	01m 0E		Ne/HD	5 5
45756 II	spot -1 plate to plate 45750				15mm @ 15 volts		159 03 3900 4300	D2 4810	
45757	HD124752A	14 10.3	+68 03	22 58	00m 0	01m 0w	+67°12	Ne/—	5-5
45757F	focus test							Ne/—	10-10
45758	HD151982	17 18 5	+00° 04	00: 21	02 34	02 3E	+90 02	Fe/—	5-5
45758 II	spotted to plate #45758-				15mm @ 15 volts		D4 D3 3900 4300	D2 4810	
45759	HD146597	19 29.9	+13 04	02 43	04 34	00: 50 E	+17 13	Fe/— Ne/—	1-1 2-9
45759 II	spotted to plate 45758-55				15mm @ 04	17 SU 3900	15U 4300	SU 4810	
45759 I2	" " 45759				15mm @	SU D3 4810	7U D1	7U D2	5-5
45759F	focus							Fe/—	

Spectr. Temp. ..... Dome Temp./Hum. 44°F 58% Transparency Conditions . Cirrus 216

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 36°F 88%

40/37

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/40		2.2	K3	BC	1800/.65	150/.5	IIaDef	A	Std Vel	54°F 501 Tilt wavery — arms not against plunger	
					"	"	"	B		" "	sl blue
40/100					1800/.10	150/.5	IIIaJb	A	Std Vel	green region	sl strong comp sl strong
100/55	3"			BC	1800/.65	NO SLIT	IIIaJb	B			good exp
100/12				B.C	"	NO SLIT	IIIaJb	A			sl wk
300/				"	"	"	"	B		tele reversal	sl wk
							"	A		"	good exp
300/10		9.6	K0	BC/IT	150/.472	150/.5	IIaDe	1	Test		
							IIav-ef			6h 8% H_2 21°C	
300/34				DC/IT	150/.477	150/5	2415b		Test		
							2415b				
400/500	4	622	dF8	B.C	1200/.025	B.S.	IIaD-E	A	SB - Bl./Ly	46°F 502	fine
							IIaD-E				
1000/320		6.1	D+IV	BC	1200/.7	RS	IIIaJ-Eb	B	SG - Bln	44°F 504	
							IIIaJ-Eb 0/8-02E				
				BP	1200/7	RS.	0/8-02E	A		40°F 504	vs! blue

217

Date Fri-Sat MAY 1-2 1941 Observers Ana-Ri

Emulsion Batches:
IIaO-E 02100-01051 22 203
098-02E-05031-18041 38 240

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45760	HD 31964	4 54.8	+43° 41	19h 55m	19 57	5h 18m W	43 49.6	Fe/-	7-7
45761	HD31969	4 54.8	+43° 41	20 06	20 11	5h 32 W	43 49.6	Fe/-	5 5 / 12 12
45762	HD 14662	2h 16.9	+54° 55'	20 22	22 22	10h 22 W	55 18.4	Fe/-	3-3-3 / 8 8-8
45762T1 ✓	optical fr plate 45760					15 min @ 150 volts	pf 3900 D3 4300 D2 4810		
45763	HD 8890	1h 22.6	+88° 46'	22h 32	22 34	10h 5m W	+89° 11	Fe/-	5 - 5 / 12 - 12
45764	HD 164136	17h 54.7	+30° 12	22h 43	23 05	4h 30m E	+30° 11	Fe/-	3-3-3 / 8-8-8
45764T1 ✓	optical fr plate 45761 -					15 min @ D3 SU 4810	D1 7U Hd (3) D2 AU 5450		
45765	HD 163506	17h 51.4	+26° 09	23 09	00 04	3 26 E	26° 04	Fe/-	3-3-3 / 8-8-8
45766	HD 180583	19h 12.0	27° 45	00 09	01 35	3 15 E	27° 55.1	Fe/-	3-3-3 / 8-8-8
45767	HD 203156	21h 15.4	37° 49	1 41	2 58	3h 57 E	38° 11.9	Fe/-	3-3-3 / 8-8-8
45768	HD 224014	23h 49.4	56° 57	3 05	3 25	6h 04 E	57° 26.3	Fe/-	3-3-3 / 8-8-8
45769	HD 217476	22h 55.9	56° 25	3 30	3 53	4h 42 E	56° 51.2	Fe/-	3 3 3 / 8 8 8
45769F	focus test							Fe/-	15-15
45770	HD 217476	22 55.9	56 25	4 03	4 14	4 21 E	56 50.7	Fe-	7-7
45771	HD 224014	23h 44.4	56 57	4 18	4 26	5 03 E	57 25.2	Fe-	7-7
45771F	focus test							Fe	15-15

Spectr. Temp. ..... Dome Temp./Hum. 43°F (+06°C) 66% Transparency Conditions ..... 2.1.8.

Focus 40/38

Spectr. Temp. ..... Dome Temp./Hum. +02°C 83%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/25		2.99	A3Ic	BC	830/680	BS	IIaO-E	A	Ave Progn.	T=51°F F503	fine
40/18		2.99	A3Ia	BC	1200/.7	150*/.5	093-02E	B	//	* T=50°F F503 V Filter	fine
400/145	3'	5.4	F7Ib	//	//	//	//	A	//	tele reversed	fine, Fe sl weak
							IIaO-E				
40/18		2.5	F8Ib	BC	1200/.7	150*/.5	093-02E	B	//	T=46° F=504	v sl str
200/220		4.48	F2II	BC	//	//	//	A	//		v sl str
							0980-2E				
100/220	2-3	5.47	F2Ia	//	//	//	093-02E	B	//		fine
100/200		5.47	F2III	//	//	//	//	A	//	T=44° F=504	fine
400/220		5.75	F2	//	//	//	//	B	//	T=43° F=505	fine
100/200		4.4	F8Iap	//	//	//	//	A	//		fine
100/200		4.44	G0Ib	//	//	//	//	B	//		
				//	//	//	//	A		T: 420F F=505	
70/70		4.11	G0Ia	//	830/.68	BS	IIaO-E	B	//	T=42° F=505	sl wk
70/70		4.4	F8Iap	//	830/.680	BS	IIaO-E	A	//		sl wk
				//	//	//	//	B		T: 420 F 505	

219 Sat night Tau aloved Jupiter

Date Sat-Sun May 2/3 Observers BK RI

9" 68° Emulsion Batches: HAD:E.02100.010.51... 23 208

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45772	HD 74874	8 41 5	+6 47	2140	2150	3 30W	+6 31	Fe/-	7-7
45773	HD 101177	11 33 5	+45 40	2154	2232	1 22W	+45 13	Fe/-	5-5-5
45774	HD 146361	16 10.9	+34° 07	2240	2302	2 45E	+33 54	Fe/-	5-5-5
45775 ✓	HD 146362	16 10 9	+34 07	2304	2400	1 48E	+33° 54	Fe/-	5-5-5
45775Ti	spectral to plates 45772-				15min @ 150volts	① DA 3900	② D3 4300	③ D2 4810	
45776	HD 137112	15 20 7	+37 41	0 09	1 04	0 08W	+37 25	Fe/	5-5-5
45777	HD 137391	15 20 7	+37 41	1 07	1 12	0 14W	+37 25	Fe/-	5-5-5
45778	HD 152863	16 50 9	+25 54	1 15	1 56	0 30E	+25 46	Fe/-	5-5-5
45779	HD 160635	17 37 0	+24 33	2 05	2 59	0 15E	+24 33	Fe/-	5-55
45780	HD 179897	19 27.8	+19° 25	3 06	3 58	0 26E	+19 32	Fe/-	5-5-5
45781	HD 146361	16 10 9	+34 07	4 01	4 12	2 25W	+33 56	Fe/-	5-10
45781F	focus test							Fe/-	15-15

Spectr. Temp. ..... Dome Temp./Hum. +07°C 66% Transparency Conditions 220

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +04°C 68%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/50		3.98	F8	B.C.	830/68	B.S.	IIaO-E	A	Waterloo	T 50°F F 503	
400/350		6.90	G0	"	"	"	"	B	"		
200/175	2-3	6.20	F8V	"	"	"	"	A	"		
200/175		7.31	G1V	"	"	"	"	B			
							IIaO-E				
200/175		7.1	G1V	B.C.	830/68	B.S.	IIaO-E	A	Waterloo		v sl str
40/40		4.6	F0V	"	"	"	"	B	"	T 47°F F 504	v sl str
200/200		7.0	F8	"	"	"	"	A	"		fine
400/450	1-2	7.6	K1	"	"	"	"	B	"		fine
400/400		7.6	K0III	"	"	"	"	A	"	T = 46°F F 504	fine
450/54		6.2	F8	"	"	"	"	B	"	cloudy	sl weak
				"	"	"	"	A		T 44°F F 504	no stellar discarded

221

Date Sun.-Mon. May 3-4 Observers ....Crow.-Liu.....

Emulsion Batches:
103a-E ..02100-01051... 21 202
103a-E* ..02100-02051... 21 202
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45782	R LMi (HD 84346)	$9^h39.^m6$	34°58′	20:45	23:23	4^h09^m W	+34°35′	Fe/—	5-5-5
45782T	spectral fn plates	45782 - 45783			15 min @ 15 Volts		D4 ① 3900	D3 ② 4300	D2 ③ 4910
45783	R Boo	$14^h32.^m8$	27°10′	23:32	1:57	1^h52^m W	+26°49′	Fe/—	5-5-5
45784	X Oph	$18^h33.^m6$	8°45′	2:04	3:05	1^h00^m E	+8°49′	Fe/—	5-5-5
45784T	spectral fn plates	45784 -			15 min @ 15 Volts		D4 ① 3900	D3 ② 4300	D2 ③ 4910
45785	EP Aql (KPNO 2168)	$21^h4^m.4$	−2°40′	3:11	4:15	2^h59^m E	−2°18′	Fe/—	5-5-5
45786	HD 161096	$17^h38.^m5$	+4°37′	4:19	4:24	1^h14^m W	+4°34′	Fe/—	7-7
45786F	focus test							Fe/—	15-15

Spectr. Temp. ..... Dome Temp./Hum. ..08°C..64% Transparency Conditions ..THIN..CLOUD..COVER..
Focus .....
Spectr. Temp. ..... Dome Temp./Hum. ..05°C..73% CLEAR AT 22:00 222
40/38

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
800/800	2"-3"	9.3	M6.5e -M9e	B.C.	830/0.68	150/.3	IIaO-E	A	CW-MIRA	(EXP=158m) T 53°F 502	ok
							"				
400/400	"	9.2	M3e -M6e	B.C.	830/.68	150/.3	IIaO-E	B	"	-5m (EXP=140m) T=50°F 503	fine
400/400	3"	8.3	M5e -M7e	"	"	"	IIaO-E*	A	"	(EXP=61m) T=48°F 504	good
							IIaO-E*				
400/400	3"-4"	8.3	MIII	B.C.	830/.68	150/.3	IIaO-E*	B	M STANDARD	(EXP=64m) T=47°F 504	ok
40/50	3"	3.9	KIII	"	"	150/.5	IIaO-E	A	Std. Velocity	(EXP=5m) 1.67	
						150/1.0	IIaO-E	B		T=47°F 504	

223

Emulsion Batches:

9"68 IIaO-E 02100-02051 21 204

Date Mon.-Tues. May 4-5, 1981 Observers My.d.-Ri

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45787	HD 89449	10 14·3	19° 59	20:03	20:23	00h 38W	+19 34	Fe/-	5-5-5
45788	Vesta	10 11.7 (1950)	+20°02' (1950)	20:40	23:11	3 34 W	+20.00	Fe/-	5-5-5
45788T	spectral to plate	45787-			15 min @ 15 Volts	① P4 3900	② D3 4300	③ P2 4310	
45789	Jupiter II			23:17	00:33	3 00 W	+00°53	Fe/-	5-5-5
45790	Uranus			00:43	02:02	51 W	-19° 37	Fe/-	5-10
45790T	focus test							Fe/-	15-15

Spectr. Temp. ..... Dome Temp./Hum. . 12°C . . . 56% Transparency Conditions . . Hazy 224

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 40/37

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/120	3"	5.3	F6IV	B.C.	830/.68	120/.5	IIa-E	A	Std Vel	T 60°F F 500 1.04	
30/480	3"	8.0	G2			"		B	Solar Type	BROKEN ½ missing .40	
							IIa-E				
150/240	3"	6.2	G2	BC.	830/.68	120/.5	IIa-E	A	Solar Type	.47	
30/ 86	/	6.4	G2					B	"	cloudy/clear T: .17	
				-	-	120/1.0	IIa-E	A		T 56°F 500	

225 :: IIaO-E 1½ Boxes
IIIaJ-Eh 1 full Box
098 34×5 5 strips

Date ..Wed. Thurs. May 6-7 Observers ..Gies.-T.n.....

Emulsion Batches:
9m 68° ..IIa.O.e. 02100 ..-C 2057 21 206
.....
9m 68° ..IIa.O.ef.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
4-7915	Focus Test					0	0°	Fe/—	15-15
45791	HD 81797	09 22.7	-8 14	19 59	20 03	1 18 W	-8 34	Fe/—	7-7
45792	HD 97991	11 11.1	-2 55	20 08	23 17	2 46 W	-3 20	"	5-5-5
45792T	Spot cal'n for plates 45791-96				15m @ 15A in D4		D3 +4300	D4 41	9 0
45793	HD 149363	16 29.1	-5 56	23 24	02 54	1 02 W	-6 05	Fe/—	5-5-0
45794	HD 188439	19 50.1	+47 33	03 06	03 46	1 23 E	+47 45	"	5-5-5
45795	HD 203064 (48 Cep)	21 14.7	+43 31	03 50	04 07	2 29 E	+43 52	"	5-5-5
45796	HD 210839 (λ Cep)	22 08.1	+58 55	04 10	04 26	3 02 E	+59 20	"	7-7
	Exposure tests using Tungsten Lamp in slit viewer, blue filter in exp. motor								
T1				~3m				Fe/—	10
T2								Fe/—	10
T3								Fe/—	10
T4								Fe/—	10
T5								Fe/—	10
T6	Strip cal for above		90°						

Spectr. Temp. 52.5°F Dome Temp./Hum. +47°F/62% Transparency Conditions fine 226

Focus 502

Spectr. Temp. 43 °F Dome Temp./Hum. 37°F/88%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	IIa-e	A			
40/40	3"			"	"	"	"	B	stdvel	.62	
00/350	3"	7.18	B2V	"	"	"	"	A	Runaway *		
							IIa-e			#3 overexposed	
00/300		7.76	B0 I	BC	830/.68	BS	"	B	Runaway *	T=49°F F=503	
0/351	2"	6.18	B0 I	"	"	"	"	A	Runaway *	46° 504	
00/172	2"	4.96	08 II	"	"	"	"	B	Runaway *		
0/165	2"	5.29	06 f	"	"	"	"	A	Runaway *		
00/50				BC	830/.68	BS	IIa-f	A		T=50° F=503	
00/37				"	400/.38	"	"	B			almost
00/75				"	1200/.025	"	"	A			
00/15				"	150/.5	"	"	B			
00/55				"	600/.65	"	"	A			
							"				

227

Date May 7 8 Wed Thurs Observers Arc-Tu

4½" 68° Emulsion Batches: 098-02 E 05031 - 10041/51
* 098-02 E 05031 - 06051/26

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
45797	HD 31964	4 54.8	43° 41	20h 52	20 07	5h 50 W	43° 19.7	Fol/ — Neg —	5 - 10 -
45798	HD 8890A	1 22.6	88° 46'	20h 17	20 19	8 0 W	+89° 12.0	"	"
45799	HD 161796	17 42.5	+50 05	20 33	22 55	3h 57 E	50° 00.8	Fol/ — Neg —	4 - 8 -
45799T	Spot calc for 45797	— 41802		15 min @	15V D3 4810	7V D1 Hα	7V D2 Ca 50		
45800	HD163506	17h 51.4	+26° 04	23h 07	00 01	3 04 E	26 01.8	Fol/ — Neg —	24 - 48 -
45801	HD164136	17 59.7	+30 12	00 07	00 27	3 39 E	+30 11	"	4 - 8 -
45802	HD180583	19 12.0	+27 45	00 31	01 53	2 35 E	+27 52	"	4 - 8 -
45803	HD 203156	21 19.4	+37 49	02 00	03 12	3 20 E	+38 09	"	4 - 8 -
45803T	Spot calc for 45803-5.			15 min @	15V D3 4810	7V D1 Hα	7V D2 Ca 50		
45804	HD217476	22 55.9	+56 25	03 17	03 37	4 35 E	+56 48	Fol — Neg —	6 - 12 -
45805	HD 224014	23 49.4	+56 57	03 43	03 56	5 09 E	+57 23	"	6 - 12 -
45805F	Focus Test					"	"	Fol —	20 -

Spectr. Temp. +55 °F Dome Temp./Hum. 50F / 60% Transparency Conditions Fine - sl hazy 228

Focus 502-503

Spectr. Temp. +50 °F Dome Temp./Hum. 49F / 70%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/18	2"	≈2	A8Ia	B.C.	1200/1.7	150*/15	098-02E	A	Arc-Prog.	* "V" filter taped on. Perisc. shut part	sl unfocus sl hz
40/19	"	V 2.5	F8Ib	"	"	"	"	A	"	" " "	sl hzy Fine
100/200	2"	V 7.27	F8	"	"	"	"	B	"	corrected periscope) fogged 7 min 6 time	sl wk fogged
							"				
100/100	2'	V 4.47	F2Ib	BC	1200/1.7	150/15	"	A	Arc Prog		
100/107	1-3"	V 4.48	F2II	"	"	"	"	B	"		
200/100	2"-3"	V 5.93	F5I-II6	"	"	"	"	A	"		
200/100	3"	V 5.75	F2	"	"	"	098-02E*	B	"	51°F Set 503	
							"				
200/107	2"-1"	V* 4.99	G0Ia	BC	1200/1.7	150*/15	"	A	Arc Prog	Lighter*?	2nd Fine
40/21	2"	4.4	F8Ip	"	"	"	"	B	"		hzy Fine
				"	"	"	"	A	Set 503	T=50°F prob good except at focus	cool sl blur
										accurately when Dome T drops to good T.	

229 Lovely

Date Dec 12/13 Observers Km-Tn

Emulsion Batches: Du Pont 02100 - 05051 25 206

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45806	HD 84441 = 40 Leo	9h 40.2	+29° 14	21:39	21:51	3h 12 W	+23 57	F/—	1
45807	HD 87449 = 40 Leo	10h 14.3	+19° 57	21:59	22 14	3 02 W	+19 40	"	7-7
45807T	* Spot Calib for	45806-12.			15m @ 15V	D4 3400	D3 4300	D2 1600	
45808	HD 87906 = α UMi	1h 23.6	+88° 46.4	22 23	22 27	11h 30 W	+87 07	F/—	7-1
45809	HD 88[illegible] = κ UMi	"	"	22 28	22 29	11 32 W	"	"	"
45810	HD 8890 = ν UMi	"	"	22 31	22 39	11	"	"	"
45811	HD 163506 = 8 Her	17h 59.4	+26° 4	22 : 42	00 32	2h 16 E	+26° 07	F/—	5-5
45812	HD 166205 = 3 UMi	18h 40.6	+87° 01	20 38	03 09	01 27 E	+87° 11	F/—	5-5
45812T	Spot Calib	for 45806-12.			15m @ 15V	D4 3400	D3 4300	D2 1600	
45812F	Focus Test					"	"	F/—	15-15

Spectr. Temp. 50°F Dome Temp./Hum. +40°F/90% Transparency Conditions ... some cloud ... 230

Focus 503

Spectr. Temp. 42.5° Dome Temp./Hum. +33°F/99%

MAY 9-10 Lovely Aurora seen thru cloud on Fri a 23h EST reds Green to South of Zenith

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/36	4"	3.3	50/I3	B"	5[illegible]/[illegible]	[illegible]	[illegible]05	A1	Sky/Evans	T=50° F Focus 503	.68
20[illegible]/175	4"	5.3	F5[illegible]	"	"	"	"	B	Sky Veil Light/Evans		v sl str.
							"				
40/69		3.3[illegible]	F[illegible]	BC	830/68	BS	"	A	Sky/Evans		strong
40/35	4"	"	"	"	"	"	"	B	"		sl strong
40/55		"	"	"	"	"	"	A	"		sl strong
2[illegible]/40		[illegible]	F2[illegible]	"	"	"	"	B	"		sl strong
400/336	5"	6.7-7.7	FD-G1	"	"	"	"	A1	"	T=46°F Focus 504 (45)	fine
							"		In second box "alone"		
				"	"	"	"	B	42.5°F	Set 504	v sl red

231

Emulsion Batches: 9m 68F IIaO-E 02100 - 05051 23 196

Date Wed-Thurs, May 13/14 Observers G.S. - Tn

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45813F	Focus test							Fe/-	15-15
45813	HD 81797	9h 22.7m	-8° 14'	20:00	20:02	1h 46m W	-8° 34'	Fe/-	7-7
45814	HD 97991	11. 11.1	-2 55	20: 14	23:00	2h 56m W	-3° 22'	Fe/-	5-5
45814T	Spot Calib for	45813 - 17		15 min @	15V 3900 D4	4300 D3	4810 D2		
45815	HD 149363	16 29.1	-5 56	23:07	02:29	1h 06m W	-6° 04'	Fe/-	5-5
45816	HD 188439	19 50.1	+47 33	02:33	03:11	1h 31m E	+47° 46'	Fe/-	5-5
45817	HD 197419	20 38.5	+35 06	03:14	04:11	1h 19m E	+35° 24'	Fe/-	5-5

Spectr. Temp. +51°F ..... Dome Temp./Hum. +48°F/75% Transparency Conditions ...Fine..... 232

Focus ....503.....

Spectr. Temp. ..... Dome Temp./Hum. +37°F/95%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
								B		T=+51°F F=503	
40/38	3'	2.2	K3 II-III	BC	830/.68	BE	IIaO-E	A	Skl. Velocity	.76	
400/350	2"	7.18	B2 V	"	"	"	"	B	Runaway *	cloud	
							"				
400/300	4-2"	7.76	B0.5 V	BC	830/.68	BS	"	A	Runaway *	T=50°F	
200/161	3"	6.18	B0.5 III$_p$	"	"	"	"	B	Runaway *	F=504	
200/162	4"	6.52	B2 IVe	"	"	"	"	A	Runaway *		

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Date 16/17 May '81 Sat/Sun Observers Bl. T.

Emulsion Batches:
5m 67 IIIaJ-e 07119 -2404/60 3.t
098-02e 05031 -0605/131 213
9m 68 IIa0-e 07102 - 05051

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45818F	Focus Test					1h 0W	+20°	Fe/-	2-2
45818	HD112028	12h 48m.3	+83° 58'	20:05	22:09	00h 40m W	+83 31°	Fe/-	12-12-12
45818T ✓	Spot Cals for	45818,20	15min @ D4	17.5V 3900	15V 4300	15V 4810			
45819	HD112028	12h 48m.3	+83° 58'	22:23	22:56	01 31 W	+83°27'	Fe/- Mo/-	4-4-4 9-9-9
45819T ✓	Spot Cals for	45819,22,24 (next night)	15min @		15V D3 4810	7V D1 Hα	7V D2 5450		
45820	HD141513	15h 14m.4	-3° 07'	23:06	23:35	00h 52m E	-3° 20'	Fe/-	12-12-12
45821	HD157482	17h 18m.5	+40° 64'	23:38	01:27	00h 31m E	+40° 00'	Fe/-	5-5-5
45821T ✓	Spot Cals for	45821		15min @ 15V	D4 3900	D3 4300	D3 4810		
45822	HD186547	19h 39m.9	+13° 04'	01 35	04 25	00 05 W	+13° 17'	Fe/ No/-	4-4 9-9

Spectr. Temp. 58°F ..... Dome Temp./Hum. 52°F/72% ..... Transparency Conditions . sl. hazy 284

Focus . . 500 .....

Spectr. Temp. 43°F ..... Dome Temp./Hum. 37F . . / 80%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	IIIaJ-e	A		T=58°F F=500	
40/200	3"	5.28	B3	BC	830/.68	BS	IIIa-J E	B	Shell - Bln		v sl str.
							IIIa-J-E				
40/60	3"	5.28	B8	BC	1200/.7	RS*	098-02E	A	Shell Bln	*T=54°F F=502 GG12 Filter Tel. Rad.	
							098-02E			marked 20T ??	
40/200	2-3	3.50	A0 V	BC	1200/.025	BS	IIIaJ-e	B	SB Bln	Tel. Direct T=54°F Set 500	
200/501	2	6.22	dF8	"	"	BS	IIaO-e	A	SB-Bln/Ly		fine comp. week
							IIaO-e			not marked ?? #2 missing?	
200/243	3"	6.1	dF8 IV	BC	1200/.7	RS	098-02E	B	SB-Bln	* Spec. Exposure time T=52°F F=502	sl wk
										Spot plates. This night very difficult to identify — nos. missing or wrong	
										all IIIaJ high fog 3 wks seems to be limit for storage of gas hypered plates	

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Date 17/18 May 1981 Sun/Mon Observers Blu-Tu

Emulsion Batches:

9" 68° IIaO e 02120 - 13051 21208

5" 67° IIaJ e 07119 - 24041

5" 68° 098-02E 05031 - 06051 39 207

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45823	BD 157482	17h 18m.5	+40° 04'	21:49	00:15	01 40 E	+40° 04'	Fe/-	5 5-5
45823T	Spot Calc for 45823 -			15m @	@ 15V	D4 3400	D3 4310	D2 4[illegible]	
45824	HD 200120	20h 56m.4	+47° 08'	00:19	02:10	03 24 E	+47° 30'	Fe/-	12-12-12
45825	HD 200120	20h 56m.4	+47° 08'	02:14	02 54	02 40 E	+47° 30'	Fe/- / Fe/-	4-4-4 / 9-9-9
45825T	Spot Calc for 45825 - 27			15 min @	15 D2 4400	7V D1 Hα	7V D2 5450		
45826	HD 200 120	20 56.4	147 08	02 56	03 38	01 56 E	+47 30	Fe/- Fe/-	4.4 9 9 9
45827	"	"	"	03 39	04 15	01 16 E	"	"	4-4- 9 9
45827F	Focus Test						"	Fe/-	

Spectr. Temp. 50°F ..... Dome Temp./Hum. 42°F / 60% Transparency Conditions Cirrus 286

Focus ..502.....

Spectr. Temp. 44°F ..... Dome Temp./Hum. 34°F / 75% Aurora w/ R-I splashes seen near Fullmoon very weak by 01 EST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/1000	4"	6.22	dF8	BC	1200/-.025	BS	IIa-0 E	A	SB - B1a/Ly		fine comp sl weak
							IIa-0E				
40/200	4"6"	4.51	B1e	BC	1200/-.025	RS	IIa-J E	B	Be - B1a	T=46°F in Brt Aurora oth	night fog, fine
40/60	4"	4.51	B1e	BC	1200/.7	GG13 RS	098-02 E	A	Be - B1a	T=42°F Focus = 505	v sl wk fog
							098-02E				
40/60	3"	4.7	B1e	BC	1200/.7	GG13 RS	098-02E	B	Be - B1a	emission	v sl wk dk uneven good exp
40/60	3"	"	"	"	"	"	"	A	"	possible protons w/ dots not fully exposed for 1st half of exp, 42°F	
				"	"	"	"	B	Se/505		
				All recent 098s developed					5 min @ 68°F		

237 Only 6 spectra left.

Date 18/19 May 1981 Mon/Tues Observers GIS :- Tn

Emulsion Batches: 9^{m}68° IIa.O-E 02100 - 13057/21204

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45828F	Focus test					$0^{h}\ 0^{m}$	$0^{o}\ 00'$	Fe/-	15-15
45828	HD 81797	$9^{h}\ 22.^{m}7$	$-8^{o}\ 14'$	20:07	20:10	$2^{h}\ 13^{m}$ W	$-8^{o}\ 34'$	Fe/-	7-7
45829	HD 97991	11 11.1	$-2^{o}\ 55'$	20:16	23:13	$3^{h}\ 28^{m}$ W	$-3\ 20$	Fe/-	5-5-5
45829T	Spot Cal's	for	45828-	34	15min @ 15V		D4 3900 D3 4300 D2 4800		
45830	HD 188439	19 50.1	+47 33	23:23	00:46	$3^{h}\ 34^{m}$ E	+47 46	Fe/-	5-5-5
45831	HD 197419	20 38.5	+35 06	01:05	02:22	$2^{h}\ 51^{m}$ E	+35 24	"	5-5-5
45832	HD 210839 (Calib)	22 08.1	+58 55	02:26	02:43	$3^{h}\ 58^{m}$ E	+59 19	"	5-5-5
45833	HD 187567	19 45.4	+7 39	02:52	03:49	$0^{h}\ 29^{m}$ E	+7 51	"	5-5-5
45834	HD 203064 (Calib)	21 14.7	+43 31	03:53	04:06	$1^{h}\ 42^{m}$ E	+43 51	"	7-7

Spectr. Temp. 153° F ..... Dome Temp./Hum. 44°/.58%. Transparency Conditions ..Some cloud.....238

Focus ..502.....

Spectr. Temp. ...47°F..... Dome Temp./Hum. 39°F/.70%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	IIaO E	A			Stellar very weak
40/ 38	2-3"	2.2	K3II-III	BC	"	"	"	B	Std. Velocity	.57	
200/ 129	"	7.18	B2II	"	"	"	"	B	Runaway *	maybe fog (morning cyprus)	fine
							"				
200/175		6.18	B0.5Ia	"	"	"	"	A	Runaway *	T=50°F F=503	fine
200/164	4"	6.52	B2IIe	"	"	"	"	B	Runaway *	(1 med missing)	
200/172	2"	5.29	O6f	"	"	"	"	A	Runaway *	T=47°F F=504	fine
200/160	3"	6.42	B2.5IIe	"	"	"	"	B	Runaway *		
200/183	2"	4.98	O8II	"	"	"	"	A	"		v sl str.
								all	comparisons	slightly weak	
					Kt						

Note sure you get all plates from the large Dy Dex.

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Emulsion Batches: 9m 68 IIaO-e 02100 – 13051 21 201

Date MAY 19-20/[illegible] Observers Rm-TT

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45835F	Focus Test					0 0 W	0 0	Fe/–	17-17
45835	HD84491 = 6 Leo	9h 40.2	+24° 14'	20 05	20 12	2 0 W	+23 58	Fe/–	7-7
45836	HD87499 = 40 Leo	10h 14.3	+19° 59	20 14	20 24	1h 40 W	+19 40	Fe/–	7-7
45837	HD167196	17h 42.5	+50° 05	20 31	00 03	02 07 E	+50 09	Fe/–	5-5-5
45837T	Spot Calib for 45835–40			15 min @ 15V		D4 3400	D3 4300	D2 4000	
45838	HD186088 = 5 UCyg	19h 40.6	+29° 01	00 08	01 57	02 13 E	+27° 19	Fe/–	5-5-5
45839	HD195295 = 11 Cyg	20h 26.3	+30° 21	02 00	02 14	02 40 E	+30° 24	Fe/–	7-7
45840	HD203156 = HR8157	21h 15.4	+37° 49	02 18	04 13	01 30 E	+38° 17	Fe/–	5-5-5

Spectr. Temp. 56.5°F ..... Dome Temp./Hum. 55°F / 55% Transparency Conditions Hazy 2140

Focus ..... 5.00 .....

Spectr. Temp. 53.°F ..... Dome Temp./Hum. 46°F / 60% Another Aurora in North at 0130 EST

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	8301/68	2S	II-O	A			
40/70	1-3'	3.8	Gap I	"	"	"	II-O-e	B	Capt Kun		sl strong
70/35	"	5.3	F5 I	"	"	"	"	A	stellar	.22	v s/sn.
200/400	2"	7.6	F3 I	"	"	"	"	B	13 min/Eau	½ inch bottom off end	1.27 v s/sn.
							"				
90/175	1-4"	6.7-7.7	F2-I	"	"	"	"	A	Capt/Eau	Spect 55.5°F Focus 5.27	
70/70	2"	4.9	F5-I	"	"	"	"	B	Capt/Eau	Spect T=54°F ½ 7.18	s/sn.
90/350	3-4'	5.1	F2	"	"	"	"	A	Capt/Eau	"	
										* plate marked 39 is not broken	

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Date 20/21 May/81 Wed-Thurs Observers G.I.S. - R.I.

8½ᵐ 68°

Emulsion Batches: IIa-O-E 02100-18057 20212

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45841F	Focus Test					0ʰ 08ᵐ W	+26° 25′	Fe/—	17-17
45841	HD81797	9ʰ 22.ᵐ7	−8° 14′	20:16	20:19	2 30W	−8 30	Fe/—	7-7
45842	HD97991	11 11.1	−2 55	20:24	22:00	2 23W	−3 18	Fe/—	5-5-5
45843	HD149363	16 29.1	−5 56	22:05	01:17	0 23W	−6 03	Fe/—	5-5-5
45843T	spot cal. for plate	45841-	45846		15min @ 150 volts	D4 3900	D3 4300		D2 4210
45844	HD 188439	19 50.1	+47 33	01:22	02:10	2 02E	+47 47	Fe/—	5-5-5
45845	HD 197419	20 38.5	+35 06	02:14	03:31	1 30E	+35 24	Fe/—	5-5-5
45846	HD 210839 λ(O5)	22 08.1	+58 55	03:35	03:58	2 33E	+59 21	Fe/—	5-5-
45846T	spot calib — base test			D3 30min 7464	@ 7½V	3hrs @	15°C	subt. hexaflu.	

Spectr. Temp. 66°F ..... Dome Temp./Hum. 63°F / 50% Transparency Conditions ..... clear, cloud patches going by 242

Focus ... 498 - 499 .....

Spectr. Temp. 60°F ..... Dome Temp./Hum. 54°F / 61% 40/34

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	IIaO-E	A		T= 66°F F= 498	
0/19	3"	2.2	K3 II-III	"	"	"	"	B	Std. Velocity	.86	fine
400/350		7.18	B2 V	"	"	"	"	A	Runaway *	.66	fine
400/300		7.76	B0.5 V	"	"	"	"	B	Runaway *	.49	fine
							IIaO-E			1mi at D4 to 9300	
00/175		6.18	B0.5 III$_p$	BC	830/.68	BS	IIaO-E	A	Runaway *	T= 63°F F=499	vslsm.
00/175		6.52	B2 Ie	"	"	"	"	B	Runaway *	.86	vslsm.
0/70		5.29	O6f	"	"	"	"	A	Runaway *	.62	fine
							HIE		4143-033-03		

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Date 21/22 MAY/81 Thurs Fri. Observers ... A.R.E. - R. .....

5m 68°

Emulsion Batches:
098-02E ... 05.031 - 0605.1 43 225
098-02E ... 05.031 - 1805.1 35 209
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Exp. Mtr
45847 Fl	focus test							Fe/-	20/-	
45847	HD 84441	9h 10.2	+24° 14	20:10	20:15			Fe/- Dg/-	6-6 12-12	40/30
45848	HD 163506	17 51.4	+26° 04	20:29	21:18	4h 39m E	26° 06	Fe/- D/-	4-4- 8-	50/ 20
45849	HD 164136	17 51.7	+30° 12	21:53	22:22	3h 59m E	30° 11.5	Fe D/-	4 4 F-	150/ 100
45849 T1 ✓	spectral for plate	45847 - 45851			15 sec @	① D3 15U 4810	② D1 7U Hg	③ D2 7U 5460		
45850	HD 8810A	1h 22.5	+88° 46'	23:30	23:33	11h 46m W	89° 12.8	Fe/- D/-	6-6 12-12	40/ 30
45851	HD 180583	19h 12.0	+27° 45'	22:41	1:05	2h 27 E	27° 53.8	Fe/- Dg/-	4-4-4 8-8-8	400/ 300
45852	HD 203156	21h 15.4	+37° 49	1:11	2:41	2h 55 E	38 09.3	Fe/- D/-	4-4-4 8-8-8	200
45852 T1 ✓	spectral for plate	45852 - 45854			15 sec @	① B3 15U 4810	② D1 7U Hg	③ D2 7U 5460		
45853	HD224014	23h 19.4	+56° 57	2:47	3 10	5h 00m E	+57 23.4	Fe/- D/-	4-4-4 8-8-8	200
45854	HD 7927	1h 13.8	+57° 42	3:15	3:55	5h 41m E	+59° 10.3	Fe/- D/-	4-4-4 8-8-8	200

Spectr. Temp. ....72.5F..... Dome Temp./Hum. 19°C/51%. Transparency Conditions ....good.....244

Focus .....497.....

Spectr. Temp. ..... Dome Temp./Hum. 16°C/56% 40/34

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B.C.	1200/.7	150/*100	098-02E	A	Acc prog	*"V" filter on	sl red
40/20	2"	298	G1II-III	B.C.	1200/.7	150/.5	098-02E	B	Std vel	guiding problems	fine
100/200	3-4"	5.97	F2Ia	"	"	150/.5	"	A	Acc Prog		fine
100/200		4.98	F2II	"	"	"	"	B	"		fine
							098-02E				
10/18		2.5	F0Ib	"	"	"	"	A	"		v sl str
100/200		5.93	F5-II	"	"	"	"	B	"		fine
100/200		5.75	F2	"	"	"	098-02E*	A	"	T 68°F F498	fine
							098-02F*				
100/200		4.4	F9Iab	"	"	"	"	B	"		fine
100/200		4.95	F0Ia	"	"	"	"	A	"	T 66°F F498	fine

245

Date May 22/23 Fri.-Sat. Observers Rm.-Ri.

8½" 68° Emulsion Batches: Tao-E 02100-18051 23 200

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45855F	[illegible]							Fe/—	17-[illegible]
45855	HD 84441 = ekc	9h 40.2	+24°14	20 : 15	20 23	2h 25W	+23 54	Fe/—	7-7
45856	HD 89449 = 40Leo	10h 14.3	+19°59	20 : 27	20 38	2h 05W	+[illegible]	Fe/—	7-7
45857	HD 161796	17h 42.5	+50°05	20 : 47	00 37	1h 25E	+50° 05	Fe/—	5-5
45857T	Spectrum for 45855-61				15 min @ 15V		D4 3700 D3 4300 D2 [illegible]		[illegible]
45858	HD 186660 = 51 Cyg	19h 40.6	+39°01	00 38	01 32	02 25E	+[illegible]	Fe/—	5-5
45859	HD 180583 = 41 Cyg	19h 12.0	+27°45	01 35	03 24	0 05E	+27 57	Fe/—	5-5
45860	HD 195295 = 41 Cyg	20h 25.3	+30° 2'	03 27	03 40	1 61E	+30 19	Fe/—	5-5
45861	HD 215306 = 56 Peg A	22h 25.9	+57° 54	03 45	03 54	2 4E	+58 21	Fe/—	7-7

Spectr. Temp. 72°F ..... Dome Temp./Hum. 66°F ... 62% Transparency Conditions 946

Focus ... 496 .....

Spectr. Temp. ..... Dome Temp./Hum. 58°F ... 82% 40/33

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				13C	830/.68	13s	IIaO	A		72°F Spot 496 focus	blue blue red red
40/70	2-3	3.8	Coj II	"	"	13s	IIaO	B	Cap 4/Evans	No 52 1.49	fine
30/70	2-3	5.3	FS II	"	"	"	"	A	Hd Vel	.74	uneven, fine exp
40/675	2-4	7.6	FS[illegible]	"	"	"	"	B	Bin Cap/Evans	Exposure meter fast back dome 1.14	sl strong
400/350	3-4	6.7	FS	"	"	"	"	A	Cap4/Evans	T=66°F focus 498	fine
400/700	2-3	6.7	FS[illegible]	"	"	"	"	B	Bin Cap 4/Evans	T=65°F 1.24	v sl str.
10/70	2-3	4.3	FS II	"	"	"	"	A	Bin Cap/Evans	1.65 T=63°F focus 496	sl strong
40/70		4.1	FS16	"	"	"	"	B	Bin Cap/Evans	1.60	sl strong

241 Tour Saturn ~125 people

Date 23/24 MAY ~~SAT~~ Sun. Observers .....Gu-Pi..... evacuated only

Emulsion Batches:
HE G:1143.:033-03...09 58
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45862	HD 124897 (α Boo)	14 11.1	+19 42	22:33	22:39	00 15 W	+19 21	Ne/-	30-30-30
45863	HD 154121 (β Dra)	17 22.2	+52 33	22:46	00:23	01 17 E	+52°20'	Ne/-	30-30-30
45863T	optical fm plates	45862-65			7½V @	① D4 10min 7680	② D3 30min 8464		
45864	HD 187929 (γ Aql)	19 47.4	+00 45	00:29	03:13	00 47 E	+01 02	Ne/-	30-30-30
45865	HD 194093 (γ Cyg)	20 18.6	+39 56	03:18	04:02	00 29 E	+40° 12'	Ne/-	30-30-30
45865F	focus test							Ne/-	200-200
45865T	test cutoff	7½V	D3 30min 8464	3hrs	at 65°C in forming gas				

Spectr. Temp. 68°F Dome Temp./Hum. 16°C/66% Transparency Conditions ... hazy ... 24.8

Focus ... 4.98 ...

Spectr. Temp. ... Dome Temp./Hum. 15°C 69% 40/33.5

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10/135	-3"	1.29	KaIIIp	B.C	830/.9	150/.5	HIE	A	Std. Vel.	V. Trace	fine
10/500	"	2.9	GRII	"	"	"	"	B	IR Ceph		v sl wk
							HIE				
10/300	"	3.9	cspl	"	"	150/.3	"	A	"	66°F sl wk	
0/300	"	2.24	F8IIb	B.C.	830/.9	150/.3	HIE	B	IR Cept		v sl wk
				B.C.	830/.9	150/1.0	HIE	A		64°F F498	ok
										comparisons are weak	

249

Date 25/26 May 1966 Observers Gu-Ri

Emulsion Batches:
HIE G4143-033-03
HIE b "baked 3½ hrs
65°C - forming gap

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
458666	HD 124897 (α Boo)	14 11.1	+19 42	21:36	21:48	00 22 E	+19 19	Ne/	70-70
458667	HD 8870 (standard)	01 32.4	+08 46	01:28	02:42	07 41 E	+89 13	Ne/	30-30
458667T	spot calib" 5m	plates	458667-68			7½V D4 10 mm D3 7680	30 mm 8464		
458668	HD 213306 (CC Cep)	22 25.4	+57 54	02:49	03:40	03 50 E	+58 20	Ne/	30-30
458668F	focus test							Ne/	200-200

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..hazy..hazy..and..25.0 cloudy.

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ...15°C..92%.. 40/32

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0/140	3"	1.29	KeIIp	EC	330/1	150/1.5	HIE	A	Std Vel	'V' filter 700F F497	fair
0/370	"	2.0	cepk	EC	330/1	150/1.5	HIE	B	IR cpk	T69°F F497	v sl weak bgrd smooth
1/17	4	1.1	cepk	"	"	150/3	"	A	"	clouds	weak
				EC	330/1	150/1.0	HIE	B		T68°F F497	ok

251 IIaJ-E FULL BOX ITEM UNKNOWN
098-02 4 STRIPS LEFT
Fil Cat

Emulsion Batches: 5m 68° 098-02E 05031 18051 57 258

Date MAY 29-30 1981 Observers Arc-Tu

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45869 ✓	HD164136	17 54.7	30 12	20 39	21 16	4 29 E	+	Fe/— Ne/—	4-4-4 8-8-8
45869T	Spot Calib For	45869-70,		15m	03 15V 4810	TVD1 4x	74 02 5950		
45870	HD163506	17 51.9	26° 04	21 21	23 28	2h 13 E	+26 11	Fe/— Ne/—	4-4-4 8-8-8
45870F	Focus	Test				1 20E	+39°	Fe/—	14-14

Spectr. Temp. 172°F Dome Temp./Hum. 169°F / 90% Transparency Conditions ... Hazy ... 252

Focus ... 477 ...

Spectr. Temp. ± 70°F Dome Temp./Hum. 165° / 82.5

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/200	2"	V= 4.48	F2II	BC	120/1.7	* 150/1.5	098-02E	A	Are Prog	* V Filter	foggy exp. ok
							"				
400/153	2"	V= 5.47	F2Ia	BC	2.0/1.7	* 170/1.5	"	B	II = Prog	cloud	foggy s/ weak
				"	"	150/1.0	"	A		T= 70°F	v s/ red

253 2 Large Tours

Date 1981 May 30/31 Observers KK-FH-Tn

Emulsion Batches: 8hr 68° IIaO 02100 - 22051

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45871	HD 137909	15 23.7	+29 27	22:31	23 01	00 09E	+29 09	Fe/—	7-7
45871T ✓	Spot Calib for	45871-	74		15min @ 16V	D4 3900	D3 4300	D2 4810	
45871F	focus test							Fe/—	15-15
45872	HD 171167 vega	18 33.6	+38 41	00 08	0:11	02 06E	+38 45	"	7-7
45873	HD 161096	17 38.5	+4 37	00 20	1:12	00 12E	+4 37	"	7-7
45874	HD 159561	17 30.3	+12 38	01 18	01:51	0 35W	+	"	7-7

Spectr. Temp. 63° Dome Temp./Hum. 53°F/82% Transparency Conditions broken cloud 254

Focus 498

Spectr. Temp. ..... Dome Temp./Hum. ...../85%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/50	4"	3.93	F0p	BC	1200/-.025	BS	IIaO	A	Asm Sp. KK	some cloud & cal	
							"				CRACKED
				BC	1200/-.025	BS	"	B		temp?.	
40/45	4"	0.00	A0V	"	"	"	"	A	Fe prog	cloud	
200/300	4"	3.9	K2III	"	"	"	"	A	Std Vol	more cloud at beginning	
40/21	4"	2.2	A5III	"	"	"	"	A	Asm Sp KK	Set prog cloud	

255

Date Sun/Mon. May 31/June 1 Observers Gis - Tn

8m 68° Emulsion Batches: IIaO-e 02104 22051 IIaO-e 02100 31051

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45875F	focus test					0h 0m	+15°	Fe/—	17-17
45875	HD 89449	10h 14.3m	+19° 59'	20:24	20:38	2h 40m W	+19° 38'	Fe/—	7-7
45875T	Spot Calc for 45875	78		15min @ 15V		D4 3900	D3 4300	D2 4810	
45876	HD 97991	11 11.1	-2 55'	20:41	22:28	3h 34m W	-3° 16'	Fe/—	5-5-5
	HD 149363	16 29.1	-5 56	22:32	22:47		-6 01	Fe/—	5-
45877	HD 188439	19 50.1	+47 33	22:58	00:04	3h 26m E	+47 51	Fe/—	5-5-5
45878	HD 197419	20 41.7	+35 24	00 11	01:33	2h 44m E	+35 27	"	5-5-5
45879	HD 187567	19 45.4	+7 39	01:41	02:38	0h 48m E	+7 55	"	5-5-
45880	HD 220057	23 15.7	+60 37	02:43	03:50	3h 04m E	+61 07	"	5-5-5
45880T	Spot Calc for 45879	80			15min @ 15V	D4 3900	D3 4300	D2 4810	

Spectr. Focus. Spectr. Exp. Mtr.

Spectr. Temp. +61°F Dome Temp./Hum. +55°F / 63% Transparency Conditions Photometric 256

Focus 499

Spectr. Temp. 152 Dome Temp./Hum. +46? / 80?

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	IIaO-e	A		T=61° F=499	
40/35	3"	5.3	F6 II	"	"	"	"	B	Std. Velocity		
							"		Flame gas	broken in same time as first element in [illegible]	
00/81	3-4"	7.18	B2 I	EC	830/.68	BS	"	A	Runaway *	double exposure.	
00/13		7.76	B0.5 I	"	"	"	"	A	Runaway *	(only one Fe)	
00/170	3-4	6.18	B0.5 III p	"	"	"	"	B	Runaway *	T=57° F=501	
00/167	"	6.52	B2 IV e	"	"	"	"	A	"		
00/171	"	6.42	B2 IV e	"	"	"	IIaO-e*	B	"		
00/169	2-3"	6.94	B2 II	"	"	"	"	A	"	T=52° F=503	
							"				

257

Emulsion Batches:

5h 68° ..098-02E..05031..-2805/38 21

Date .Mon-Tues. June 11/12. Observers ..Ave.-Tm.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45881	HD8890A	1h 22.5	86° 46'	20h 45m	20h 48	11h 10 W	+89° 09.7	F — / N —	6 - 6 / 12 - 12
45882	HD164136	17h 54.7	30° 12'	21h 00	21h 20	4h 13 E	30° 19.9	Fe — / No —	6 - 4 / 12 - 10
45882	Spot Calc	for 45881	- 87		15min	15h 03 / 4 810	7V 01 / Ht	7V 02 / 5450	
45883	HD161796	17h 42.5	+50° 05	21h 26	23h 50	1h 27 E	50° 07.0	F — / N —	4 - 4 - 4 / 8 - 8
45884	HD190583	19h 12.0	+27° 45	23h 56	1 09	1h 45 E	27° 57.2	Fe — / Do —	4 - 4 - 4 / 8 - 8 - 8
45885	HD203156	21 15.4	+37° 49'	1h 15	02 19	≈2h 38 E	38° 12.6	Fe / No	4 - 4 / 8 - 8
45886	HD217476	22 55.9	+56 25	2h 26	2 52	3h 41 E	56° 55.8	Fe — / No —	6 - 6 / 12 - 12
45887	HD224014	23 49.9	+56° 57	2 57	3 33	3 55 E	57 25.8	Fe — / No —	6 - 6 / 12 - 12
45887F						0		1 m/L	20 - 20

Spectr. Temp. +62°F Dome Temp./Hum. +58°F/60% Transparency Conditions ... Fair - Sl. cloudy .25.8

Focus ... +9.8 ...

Spectr. Temp. +56°F Dome Temp./Hum. +49°F/70%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30/15	2"	v. 2.5	F8Ib	BC	1200/17	+150/15	098	A	Arc-prog	*V filter	finding uneven
00/100	"	4.48	F2II	"	"	"	"	B	"		fine
							"				
00/200	2	7.27	F8	"	"	"	"	A	"		good
0/201	2"	5.93	F8I-IIb	"	"	"	"	B	"	T=59.5° Sel 500	good
00/200	2"	5.75	F2	"	"	"	"	A	"		fine
0/100	3"	9.99	G0Ia	"	"	"	"	B	"		fine
0/102	3"	9.9	F8Iap	"	"	"	"	A	"		fine
				"	"	"	"	B		Sel 500	okay

:259

Date Tues-Wed June 2-3 '31 Observers Ros-Tin

Emulsion Batches: Hale 02100 - 31051

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
45365F	Focus Test					[illegible]	+17°	F/—	2-[illegible]
45366 ✓	HD 6941-Eta	9h 10.2	+24° 19	20h 30	20 45	3h 29 W	+23° 54	F/—	7-7
45367T ✓	Spot Calc Test	45365 - 90.		15m	@ 15v	D4 3400	D3 4300	D2 4400	
45389	HD 6941 - Eta	10h 16.3	+19° 57	20 : 54	21 : 21	03 31 W	+19 36	F/—	7-7
45390	HD 180582 = HE7308	19h 12.0	+27° 45	21 : 29	00 : 12	02 34 E	+27 56	F/—	5-5

Spectr.
Focus
Spectr.
Exp. Mtr.

Spectr. Temp. 67°F ..... Dome Temp./Hum. 63°/92% Transparency Conditions 260

Focus ..... 478 .....

Spectr. Temp. 64°F ..... Dome Temp./Hum. 59°/91% .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1st/65	25	D-76	A		Focus 495	m
7/100	1"	3.5	G1/III	"	"	"	"	B	Copy/Exam		NSI SM
							"				
7/35	1"	5.3	F5II	"	"	"	"	A	std wk-	double exp	
7/133	2"	6.7	25-Blue	"	"	"	"	B	Copy/Exam	cloud	weak

261 New mirror surface!

Date Thurs-Fri, June 4-5/81 Observers GIS - Jn

Emulsion Batches: #aO-e 07100 - 31051

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
45891	HD 136202	$15^h\ 14.^m2$	+2° 09'	21:01	21:23	$1^h\ 18^m$ E	+ 1° 54'	Fe/—	7-7
45892	HD 188439	19 50.1	+47 33	21:30	22:31	$4^h\ 44^m$ E	+47 51	Fe/—	5-5
45892T ✓	Spot Cal	For 45891	-93		5 min @ 15V	14 3900	D3 4300	D2 4810	
45893	HD 187567	19 45.4	+7 39	22:47	00:29	$2^h\ 44^m$ E	+ 7 57	Fe/—	5-5
45893F	Focus test					$2^h\ 42^m$ E	+7 57	Fe/—	20-2

Spectr. Temp. +69° F ..... Dome Temp./Hum. +65°F / 90% Transparency Conditions Hazy, damp 262

Focus ... 49.8 .....

Spectr. Temp. +67°F ..... Dome Temp./Hum. +60°F / 100%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1:/40	2"	5.6	F8 III 1	BC	830/.68	BS	IIaO-e	A	Std. Velocity	T=69°F F=498	fine
400/350	2-3"	6.18	B0.5 III$_p$	"	"	"	"	B	Runaway *		v. strong
							"				
00/36	3"	6.42	B2.5 II$_e$	BC	830/.68	BS	"	A	Runaway *		fine
				"	"	"	"	B		T=67°F	"
										Too hard	

263

Date Fri.-Sat. June 5-6/81 Observers ....Crw.—Tm.....

Emulsion Batches:
Hale 02100 - 04061
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45894	R LEO (HD 84748)	$9^h 42.^m 2$	$+11° 53.'5$	20:40	21:10	$4^h 04^m$ W D4	$11° 32'$ D3	Fe/— D3	5-15
45894T	Spot Calib for 45894			15 min	@ 15V	3900	4300	4810	
45894F	Focus Test					0	+11 32	Fe/—	15-15

Spectr. Temp. +74°F Dome Temp./Hum. +70°F/69% Transparency Conditions PATCHES OF CLOUD

Focus 495

Spectr. Temp. .... Dome Temp./Hum. ..../....

264

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
300/53	1"-2"	7.8	M6e -M4e	B.C.	830/.68	150/.3	IIaO-E	A	CW-MIRAS	CLOUDED OUT	V weak
							"				
				BC	830/.68	150/110	IIaO	A		T= 73°F Set 495	"

265. 24g Tours.

Date Sat-Sun. June 6-7/81 Observers ... A.F.C. T.A. .....

Emulsion Batches:
8" 68° IIaO-E 02100 - 04061
4" 68° 098-02E C503 - 2805 142 200

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45895	HD164136	17 59.7	30° 12'	≈ 23 07	23h 17	1h 56 E	30° 12.2	Fe/-	7·7
45895T	Spot Calib for	45895.	Also for 45898-		15 min @ 15V	04 3900	D3 4300	D2 4810	
45896	HD 163506	17 51.9	26° 04'	23° 29	00 32	0 38E	+ 26 05	Fe/-	8-8
45896T	Spot Calib for	45896			15V D3 15 min @ 4810	7U D1 Ha	7U D2 54 50		
45897	HD176155	18 53.8	+ 17 14	00 36	1 46	0 26E	+17 27	Fe/-	8-8
45897A	Focus Test					0 19E	"	Fe/-	

Spectr. Temp. 67°F Dome Temp./Hum. +59°F/80% Transparency Conditions ... Fine ... Cloudy ... 266

Focus 497

Spectr. Temp. 62.5°F Dome Temp./Hum. +56°F/90%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/40	3"	4.98	F2II	RC	830/168	85	IIaO-e	A	Arc Prog		sl str
							"				
100/100	3-5"	5.97	F2Ia	RC	1200/-7	150/15*	098-02E	B	Arc Prog	* V filter Set 498	good
							"				
100/100	4-8"	5.4	F5	RC	1200/-7	150/15*	"	B	Arc Prog		fine
					"	"	"	A		62.5°F Set 498	

267

Date Sun.-Mon. June 7-8/81 Observers Crw-Tm

8m 60 Emulsion Batches: IIa0-E 0211-04051

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45898	R LEO (HD 84748)	$9^h42^m.2$	+11°53'.5	20:40	21:30	4^h32^m W	+11°28'	Fe/—	5-5
45899	R Boo	$14^h32^m.8$	+27°10'	21:36	23:38	1^h52^m W	+26°45'	"	5 5 5
45900	V Boo	$14^h25^m.7$	+39°18'	23:43	01:33	3^h53^m W	+38°53'	"	5 5 5
45901	RT CVn	$19^h40^m.8$	+48°32'	01:37	02:44	0^h10^m E	+48°40'	"	5 5 5 5
45901 F	Focus					0	−1°00	"	15 15

Spectr. Temp. ...65°F..... Dome Temp./Hum. ~~+68~~ 67/60% Transparency Conditions .MOSTLY CLEAR.....268.

Focus .....498.....

Spectr. Temp. ..... Dome Temp./Hum. 52°F/82%

Note Previous Nights spot reln Must Apply for this Nights plates

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
00/104	3"	7.8	MKe -MKe	B.C.	830/-68	150/.3	IIaO-E	A	Cow-MIRAS	Exp = 50m	weak
00/201	4"	9.6	MKe-MKe	"	"	"	"	B	"	Exp = 122m	v sl wk
00/165	3-4"	9.4	MKe	"	"	"	"	A	"	Exp = 110m cloud Set 500 T: 61°F	sl weak
00/194	3"	9.3	MKe -MKe	"	"	"	"	B	"	Exp = 67m Ave. Set cover	good m
				"	"	150/1.0	IIaO	B	set 500	T = 58°F	
							KK		check trouble sheet.		

269

Date Wed-Thurs June 10/11/81 Observers Gu-Ri

D19 8m 68°

Emulsion Batches:
IIE 6 41143-033-03
baked 3 hrs @ 65°C
forming 990

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45902	HD 124897 (Bac)	14 11.1	+19 42	21:38	21:42	00 27 W	+19 17	No/	60-60
45903	HD 173764 (B3 Ia)	18 41.8	-04 51	21:55	01:06	00 39 E	-04 45	No/	60-60
45903T	spot calib for pl. 45902-04				7½V	D4 10m 7680	D3 2m N 8464		
45904	HD 187929 (m Cyg)	19 47.4	+00 45	01:11	03:41	00 51 W	-01 01	No/	60-60-60
45904F	focus test							No/	20

Spectr
Focus
Spect
Exp. M

Spectr. Temp. ....66°F.... Dome Temp./Hum. ....15°C 98%.... Transparency Conditions ....clear.... 2.7?

Focus ....498....

Spectr. Temp. 63°F....499.... Dome Temp./Hum. ....11°C....85%.... 40/29

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
/70	3-4"	1.29	K2 III p	BC	830/.9	150/1.5	HIE/bfg	A	SH Vel	V filter [illegible]	no comp. exp fine
/190	6-7"	4.22	G5 II	"	"	150/1.3	"	B	IR Cep L	[illegible]	sl wk
											slightly light struck
/150	Exploding	~4.3	cep L	"	"	"	"	A	IR Cep L		sl weak
				"	"	150/1.0	"	B		T=60°F F 499	sl blue

271

Date June 7-8 June 4/12/81 Observers G.u.-R.i.

Emulsion Batches:
H.E. G.11.13-03.3-03
baked 3½ hrs. @ 65°C
sorbitol gas

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45705	HD 134597 (Boo)	14 11.1	+19 42	20:45	20:47	00 24 E	+19° 18	No/	60-60
45906	HD 213078 (Cyg)	22 25.5	+57 54	20:58	22 47	06 38 E	+58 21	No/	60-60 60
						D4 10 min	D3 30 min		
45906T	Spot calib for plates	45905 + 08			7½V	7680	8464		
45906T2	spot calib test for IIIaJ	15 min @ 15 volts			D4 4300				
45906T3	" " "	"			"				
45907	HD 199193 (Cyg)	20 19.6	+39 56	01:39	02:06	01 10 E	+40° 12'	No/-	60-60 60
45908	HD 187929 (Aql)	19 47.4	+00 45	02.12	03.24	00 37 W	+00 59	No/-	60-60 60
45908F	focus test							No/-	300

Spectr. Temp. 70°F Dome Temp./Hum. 19°C 65% Transparency Conditions . mostly clear 272

Focus 497

Spectr. Temp. 68°F 498 Dome Temp./Hum. 16°C 40/29 73%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
50	2-3	1.29	K2IIIp	BC	830/9	150/5	IIIE hfg	A	Std Vel	V [illegible] terminated by clouds	fine
75	"	1.2	Cephk	"	"	150/3	"	B	IR Cephk		weak
							IIIa Jeb				
							IIIa Jeb				
200	2"	2.24	F5Ib	BC	830/9	150/3	IIIE hfg	A	IR Cephk	T 66°F F 498	exp. fine bar smudged
150	"	3.7	Cephk	"	"	"	"	B	"		v sl wk
				"	"	50/1.6	"	"		T=66°F F 498	sl blue

273

Fri - SAT

Date JUNE 12-13 1981 Observers ARE - RI

4h 68°

Emulsion Batches:
098-02 E 05031-28051 A1 160
098-02 E 05031-07061 38 186

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45909T	focus Test							Fe/-	22-22
45909	HD163506	17 51.4	26° 04	20h55	21 49	3h 02 E	26° 06.2	Fe/-	4-4-4
					①	15UD3 ②	7UD1	UV/-	8-8-8
45909T	spectral fr plate	45909-	45911		15min @	4810	Hα	③ 7UD2 5450	
45910	HD164136	17 51.7	30° 12	21 48	22 02	2h 47 E	30° 11.7	Fe/-	4-4-4
								UV/-	8-8-8
45911	HD176155	18 53.8	17° 14	22 06	22 37	3h 12 E	17° 21.1	Fe/-	4-4-4
								UV/-	8-8-8
45912	HD180583	19 12.0	27° 45	22:47	00 11	1h 56 E	27° 54	Fe/-	4-4-4
								UV/-	8-8-8
45912T	spectral fr plates	45912-45916			① 15min @	15UD3 ② 4810	7UD1 Hα	③ 7UD2 5450	
45913	HD203156	21 19.4	37° 49	00 16	1h 40	2h 30 E	38° 11.7	Fe/-	4-4-4
								UV/-	8-8-8
45914	HD 8890A	1h 22.5	56° 16	1 46	1 50	7h 22 E	39 11.2	Fe/-	6-6
								UV/-	12-12
45915	HD 7927	1 13.8	57° 42	2h 01	2 30	5h 40 E	58 08.8	Fe/-	4-4-4
								UV/-	8-8-8
45916	HD 14662	2 16.9	54° 55'	2 35	3 29	5h 45 E	55 18.1	Fe/-	4-4-4
								UV/-	8-8-8

Spectr. Temp. ...68°F..... Dome Temp./Hum. ...15°C...92%... Transparency Conditions ...SCATTERED...CLOUDS....274

Focus .....498.....

Spectr. Temp. ...69°F..... Dome Temp./Hum. .....15°C 100%..... 40/29

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B.C.	1200/.7	150/1.0	098-02 E*	A	ARE Prog.		clear
00/200	2-3	5.47	F2Ia	B.C.	1200/.7	150*/.5	098-02-E*	B	"	* "V" FILTER TAPED ON	fine str comp.
							098-02-E*				
20/40		4.48	F2II	B.C.	1200/.7	150*/.5	098-02 E*	A	ARE Prog		fine streaked
00/200		5.9	F5	B.C.	1200/.7	150*/.5	098-02 E*	B	"		fine
00/200		5.93	FGIIIb	B.C.	1200/.7	150*/.5	098-02 E	A	"		fine
							098-02 E				
00/300		5.75	F2	B.C.	1200/.7	150*/.5	098-02 E	B	ARE Prog		fine
0/18		2.5	F8Ib	B.C.	1200/.7	150*/.5	098-02 E	A	"		str
0/200		4.95	FOIa	B.C.	1200/.7	150*/.5	098-02 E	B	"		good
0/70		5.40	FIIb	B.C.	1200/.7	150*/.5	098-02 E	A	"		sl weak

275

Mon - Tues.

Date June 15-16, 1981 Observers Gus - Ri

8" 28° IIaO-e

Emulsion Batches: 02100 - 08061

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
45917F	Focus test					0h 09m W	+20° 12'	Fe/—	20-2
45917	HD 188439	19h 50.1m	+47° 33'	20:51	21:41	04 52 E	+47 48	Fe/—	5-5
45918	HD 187567	19 45.4	+7 39	22:08	00:04	02 25 E	+7 55	Fe/—	5-5
45918T1	optical test plate	45917-20			15 min @ 15 Volts	① D4 3900	② P3 4300	③ D2 4810	
45919	HD 197419	20 38.5	+35 06	00:10	01:19	02 02 E	+35 24	Fe/—	5-5
45920	HD 201910	21 07.5	+40 47	01:24	02:20	01 31 E	+41 06	Fe/—	5-1
45920T1	optical test plate	"	"		15 min @ 15 Volts	D4	4300		
45920T2	"	"	"		"	"	"		

Spectr. Temp. 183°F Dome Temp./Hum. +80°F/83% Transparency Conditions . Hazy, windy 276

Focus 493 - 494

Spectr. Temp. 181°F Dome Temp./Hum. +77°F/89%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	IIaO-e	A		BROKEN ½" MISSING T=83° F=493	¼ okay
400/370	2"	6.18	B0.5III$_p$	"	"	"	"	B	Runaway*		fine
400/203		6.42	B2.5III$_e$	"	"	"	"	A	Runaway*	cloud Exp. meter acting up	wk
							I-aO-E				
400/350	3"	6.52	B2Ie	BC	830/.68	BS	IIaO-e	B	Runaway*		fine
400/76		7.27	B5I	"	"	"	"	A	Runaway*	T=81° cloud. F=494	wk
							IIIaJeb				
							IIIaJeb				

.277

Date 17/18 June, 1981 Wed/Thurs Observers Blu - Tu

Emulsion Batches:
IIaJ-e 07119 - 16061/30 257
IIa0-e 02100 - 08061
098 02e 05021 - 07061/57 225

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45921F	Focus Test					0h 00m	0°	Fe/-	15-15
45921	HD 191513	15h 44m.4	-3° 07'	20:35	20:59	01h 22m E	-3° 16'	Fe/-	12-12-12
45922 ✓	HD 157482	17h 18m.5	+40° 04'	21:04	22:29	01 24 E	+40° 04'	Fe/-	8-8-8
45922T	Spot Calib for 45921, 26.			15 min	17.5V D4 @ 3900	15V D4 4300	15 V D4 4810		
45923	HD 186547	19h 39m.9	+13° 04'	22:37	00:00	02h 15m E	+13° 24'	Fe/- Ne/-	4-9-4 9-9-9
45923T	Spot Calib for 45922			15 min	15V D4 3900	D3 4300	D2 4810		
45924 ✓	HD 200120	20h 56m.4	+47° 08'	00:06	00:32	02 59 E	+47° 32'	Fe/- Ne/-	4-8 13-13
45924T ✓	Spot Calib for 45923+25			15 min	15V D3 @ 4810	7V D1 Hα	7V D2 5450		
45925	HD 200120	20 56.4	+47 08	00:41	01:20	02h 11m E	+47 32	Fe/- Ne/-	6-6
45926	HD 200120	20h 56m.4	+47° 08'	01:24	02:46	00h 45m E	+47° 32'	Fe/-	12-12-12
45927	HD 200120	20h 56m.4	+47° 08'	02:49	03:35	00h 02m W	+47° 32'	Fe/-	12-12-12

Spectr. Temp. 72°F+ ..... Dome Temp./Hum. 67°F/H=77% Transparency Conditions ..Fine.. - slight haze...

Focus ..4.96.....

Spectr. Temp. ..65°F..... Dome Temp./Hum. 59°F/H=95%

298

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/-025	BS	IIa-O	A		T= 72°F- F=496	okay str
40/250	2"	3.50	AOV	BC	1200/-025	BS	IIa-JE	B	SB-Bln		part light str
200/500	3"-2"	6.22	dF8	"	"	BS	IIaO-e	A	St-Bln-Ly		str
							IIIaJ-e				
20/300	3"	6.1	B3IV	BC	1200/.7	GG13 RS	098-02e	B	SB-Bln	T=69.5F F=497	fine
							IIaO-e				
40/61	3"	4.51	B1e	BC	1200/.7	GG13 RS	098-02e	A	Be-Bln		sl wk streaked
							098-02e				
40/60	3"	4.51	B1e	BC	1200/.7	GG13 150/.7	"	B	Bo-Bln		sl wk str comp
40/200	3"	4.51	B1e	BC	1200/-025	150/.7	IIIa-JE	A	Be-Bln	T=67°F F=497	sl str str comp.
40/200	2"-3"	4.51	B1e	BC	1200/-025	BS	IIa-JE	B	Be-Bln		str

279

Date 18/19 June 1981 Thurs/Fri Observers KK-Tn-Ford

Emulsion Batches:
IIaD 02100-08061
IIIaJ-e 07119-16061

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45928	HD121370	13 49.9	+18 54	20:33	20:35	0:13 W	+18 35	Fe/—	11-11
45929	HD 137909	15 23.7	+29 27	20 41	20 45	1 11 E	+29 13	"	11-11
45930	HD 122742	13 58.6	+11 16	20 48	22 06	1 35 W	+10 56	"	7-7
45931	HD 8890 A Polaris	1 22.6	+88 46	22 13	22 15	10 36 E	+89 17	"	11-11
45931T	Spot Calc	for 45928-32, 35-37,			15 min @	15V D1 3400	D3 4300	D2 4810	
45932	HD 8890 B	1 22.6	+88 46	22 25	1:23	7 25 E		Fe/—	5-?-5
45933	HD 159561	17 30.3	+12 38	1:41	1:50	1 48 W		"	16-16
45934	HD 171167	18 33.5	+38 41	1:56	1:59	0 55 W		"	16-16
45935	HD 217782	22 58.0	+42 13	2:04	2:32	3 00 E		"	11-11
45935T	Spot Calc	for 45933-34			15 min @	17.5V D4 3400	15V 4300	15V 4810	
45936	HD 217675	22 57.3	+41 47	2:34	2:40	2 50 E		Fe/—	11-11
45937	HD 201156 A	21 02.7	+33 44	2:55	3:37	0 00 W	+34 08	Fe/—	7-7

Spectr. Temp. 72°F ..... Dome Temp./Hum. +69°F/69% Transparency Conditions . good ... hazy 280

Focus ... 497 .....

Spectr. Temp. ..... Dome Temp./Hum. 63°F/90% Radium dot 27/min

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/50	1"	2.8	G0	BC	1200/-025	BS	IIaO e	A	Asm Sp KK		fine
40/50	1"	3.93	F0p	"	"	"	"	B	"		fine
30/650	1"	6.8	G8V	"	"	"	"	A	"		sl wk
40/50	2"	2±	F	"	"	"	"	B	"		fine
							"				~~fine~~ clean vert comp
30/.65	2-	8.6	F	BC	830/.68	250/.3	"	A	Asm Sp KK	focus left at 497	wk uneven v st comp
40 /210		2.2	G8III	"	1200/-025	BS	IIIaJ-e	B	"		str
40/195		0.0	A0V	"	"	"	"	A	"	T= 73°F	v str
40/51		5.17	A2	"	"	"	IIaAe	B	"		fine
							IIaJ-e				~~fine~~
40/49	2-3"	3.6	B6p	"	"	"	IIaO-e	A	Asm Sp KK		fine
60/94	"	7.38	A2	"	830/.68	150/3	"	B	"	bad/b retake	fine v st comp

281.

Friday-Saturday

Date 19/20 June 1981 Observers Gis - Tn

Emulsion Batches:
IIaO:E 02100 - 07051
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45938	HD 188439	$19^h\ 50.^m1$	$+47^\circ\ 33'$	00:21	00:57	$1^h\ 19^m$ E	$+47^\circ\ 48'$	Fe/—	5-5-5
45939	HD 201910	21 07.5	+40 47	01:01	03:22	$0^h\ 12^m$ E	+41 09	Fe/—	5-5-5
45939 T	Spot Calib	for 45938-41,			15 min @	15V 04 3400	03 4200	02 4810	
45940	HD 203064	21 14.7	+43 31	03:25	03:35	$0^h\ 05^m$ E	+43 53	Fe/—	7-7
45941	HD 204867	21 26.3	−6 01	03:38	03 44	0 11 E	−5 36	Fe/—	7-7
45941 F	Focus					"	"	"	17-17

Spectr. Temp. 67°F Dome Temp./Hum. 60°F/76% Transparency Conditions Clear, hazy, 01" 282

Focus 497

Spectr. Temp. 61°F Dome Temp./Hum. 53°F/91%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/300	5"	6.18	B0.5II$_p$	BC	830/.68	BS	IIaO-E	A	Runaway *	T= 67°F broken 10" F=497	
400/300	5"	7.27	B5I	"	"	"	"	B	Runaway *		
							"				
40/30	4"	4.98	O8II	BC	830/.68	BS	"	A	Runaway	T=62°F F=499	
40/45	4"	3.7	G0Ib	"	"	"	"	B	Std. Velocity		
				"	"	"	"	A			
		IIaOe	Dev	Jun 23	D19	8min	@68°F	Bts			

283

Tues - Wednesday

Date 25/26 June 1991 Observers FAS - TA

Emulsion Batches:

27 292 IIIa-e 07119 - 16061

20 170 IIIa-O-e 02154 - 19061

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45942	HD 141513	15h 44.4m	-3° 07'	22:22	23 01	1 03 W	- 3 20	Fe/—	11-11-11
45942T	Spot Cals for	45942.		15 min	17.5V D4 @ 3400	15V D4 4300	15V D4 4810		
45943	HD 157482	17h 22.5m	+40° 04'	23:08	23:54	00h 25m W	+40° 04'	Fe/—	7-7-7
45944	HD 159167	19h 57.6m	+41° 43'	00:26	01:45	00h 25m E	+41 58	Fe/—	5-5-5
45944T	Spot Cal's for	45943-44.		15 min	15V D4 @15V 3400	D3 4300	D3 4810		
45144T	Focus Test					00h 21m E	+41° 58m	Fe/—	15-15

Spectr. Temp. 67°F ..... Dome Temp./Hum. 62°F/H=63% Transparency Conditions ... Cloudy, some of ... 28.4

Focus ... 497 .....

Spectr. Temp. 65°F ..... Dome Temp./Hum. 60F/H 68%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/208	2-3"	B=3.5	ACV	BC	1204/-.025	BS	IIIaJ-e	A	SE-Bln		Fine
							"				
50/100	1"	B=6.22	dF3	BC	1204/-.05	BS	IIa-De	B	SE-Bln/Ly	[illegible]	Fine
100/212	1-2"	B=7.33	BOII	BC	830/.68	BS	IIa-Oe	A	ROMAWA/*	T=66°F, F=497, some clouds; hazy at end	Sink
							IIIaO-e				
				BC	830/.68	BS	IIIaO	A		T=65°F F=497	
				Note - To whoever cuts plates. I accidentally exposed nearly full image box of IIaOs & had to bring HE only box from the frig to the dome. Sorry; I know a frig is expensive							
			IIaDe Dev	June 24			D19 4 min		@ 68°F	Bks	
			IIIaJe Dev	June 24			D19 5 min		@ 68°F	Bks	

285

Fri - Sat

Date ..Jan 26-27 (71).. Observers ..R.w.-T.m.....

Emulsion Batches:
..IIa0-e..02102...-24061
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45945F	Focus Test					0 1cW	+20°	1o/—	15-15
45945	HD 36202	15h 14.2	2° 09	20:37	20:53	0 32E	+01° 53	Fe/—	7/7
45946	HD 36202 = SAO [illegible]	19h 40.6	+29° 01	21 18 -	23 57	1 44E	+29 15	Fe/—	5-5-5
45946T	Spect Calib for 45945-50	45945-50	15min	(2) 15V 3900 D4	4300 5B	4510 D2			
45947	HR 7308 = HD 186585	19h 12.0	27°54	00:14	01 52	00 41W	+27 54	Fe/—	5-5-5
45948	HD 145295 = 91 Oph	30h 25.3	+30° 21	01 57	02 07	00 17E	+30° 18	Fe/—	7-7
45949	HR 192713 = 22 Vul	20h 11.2	+23° 12	02:11	02 49	00 38W	+23° 27	Fe/—	7-7
45950	[illegible]	[illegible]	[illegible]	02 53	03 42	00 2W	+39° 16	Fe/—	7-7

Spectr. Temp. 67°F ..... Dome Temp./Hum. 63°F / 69% Transparency Conditions . Mostly clear ..... 286.

Focus ... 497. 498 .....

Spectr. Temp. 62°F ..... Dome Temp./Hum. 57°F / 80% 27 counts/min @ 40 gain Radium Spot

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	IIaO	A		cent	s/Red
40/35	3	5.6	F3 IV-V	BC	830/.68	BS	IIaO-e	B	std Vel	67°F FOCUS 497	Fine
00/707	4-5	6.9-	FO	BC	830/.68	BS	IIaO-e	B	Cepl - Rim	67°F FOCUS 498	str
							IIaO-e				
00/706	3-5"	6-7	F5-IIb	BC	830/.68	BS	IIaO E	B	Cepl/Em		str
0/60		9.43	F5II	"	"	"	"	A	Cepl/Aqu	63°F FOCUS 498	str
0/70	2-4	~5x	G2Ib	"	"	"	"	B	Cepl/Evans		str Fine
0/57	3"	~6x	F2	"	"	"	"	A	Cepl/Evans	63°F maybe blank	Yes, blank discarded
										copper problem ?	
	IIaOe		dev	June 29 D19		8 min @	68°F	Bls			

287 Sat-Sun 1 Large Proj Sat Night Tour

Date June 27/28. 1981. Observers BK-TM

Emulsion Batches: Tech-Pan 02100-24051

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45950	HD 146361	16 10.9	+34 07	22 33	23 02	0 55 W	+33 58	Fe/—	7-7
45951	HD 146362	16 10.9	+34 07	23 04	0 16	2 10 W	+33 58	Fe/—	5-5-5
45952T	Spot Calc for 45952			15 min @ 15V		D1 3400 D3 4300 D2 4810			
45952	HD 187638	19 45.9	+38 28	0 24	1 14	0 25 E	+38 45	Fe/—	7-7
45953	HD 187849	19 47.0	+38 27	1 17	1 39	0 02 E	+38 46	"	7-7
45954	HD 146361	16 10.9	+34 07	1 44	2 05	3 59 W	+33 59	"	7-7
45955	HD 196197	20 35.7	+32 10	2 09	3 36	1 10 W	+32 29	"	5-5-5
45956	HD 194093	20 18.6	+39 56	3 40	3 41	1 27 W	+40 13	"	7-7
45957F	Focus					"	"	Fe/—	10 sec

Spectr. Temp. ....71.°F..... Dome Temp./Hum. 65°F/70% Transparency Conditions .....Clear..... 288.

Focus .....4.96.....

Spectr. Temp. ..66.5°F..... Dome Temp./Hum. 60°F/77%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/500	1-½"	6.20	F8 I	BC	830/68	BS	IIaO	A	Waterlow		Fine
400/450	"	7.30	G1 V	"	"	"	"	B	"		Fine
							"				
400/450	2	7.0	G5 III	BC	830/68	BS	"	A	"		Fine
80/150	1-½"	6.9	K0 III	"	"	"	"	B	"		Fine
86/90	"	6.2	F8 V	"	"	"	"	A	"	broken 2 pcs	Fine
400/486	1"	8.0	K1 III	"	"	"	"	B	"		Fine
40/40	1"	2.9	F6 IV	"	"	"	"	A	"		str
				"	"	"	IIaO	B	st. 11 496		
	IIaO	dev	June 29	D19		8 min @ 68°F Bls					

289

Mon/Tues.
Date 29-30 June 1981 Observers G.H.S.-Tn

Emulsion Batches:
IIa.O-E 02100 - 24061
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45958F	Focus Test						+20°	Fe/-	17-17
45967	HD 161096	17h 38m.5	+4° 37'	20:40	20:45	2h 42m E	+4° 40'	Fe/-	7-7
45968	HD 188439	19 50.1	+47 33	21:01	21:40	3h 58m E	+47 51	Fe/-	5-10
45959T	Spot Cals for 45959				15min @ 15U	D4 3900	D3 4200	D2 48:0	

Alcaeae 2 25975 cannot identify

Spectr. Temp. +79°F Dome Temp./Hum. 76° / 79% Transparency Conditions hazy-cloudy 290

Focus 4.96

Spectr. Temp. .... Dome Temp./Hum. ... /

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/68	BS	IaO	A			
40/40	1"	3.9	K2III	BC	830/.68	BS	IIaO-E	A	Std. Vel.	Labelled 58	
00/44	1"	6.18	B0.5III	"	"	"	"	B	Runaway ✗	Labelled 59 Cut short by cloud.	
							"				
										Note number changes when identifying plate	
		Wave	Dev.	July 2	DA		8 min	@	68°F	RLS	

:291

Date Thurs, July 2, 1981 Observers GIS-RI

Emulsion Batches:
IIa0-E 02100-2106
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Ex
45959	HD 197419	$20^h 38.5^m$	$+35^\circ 06'$	02:21	03:07	$0^h 49^m$ W	$+35^\circ 25'$	Fe/-	5-5
45959T ✓	spd cd. fr plate 45959					15 min @ 150 volts	① p4 3900	② D3 4300	
45960	HD 187567	$19^h 45.4^m$	$+7^\circ 39'$	03:11	03:49	2 23W	+7 55	Fe/-	5-5
45960F	focus tx					0 00N	+7 55	Fe/-	1

There are 2 959T's

Spectr. Temp. 73°F Dome Temp./Hum. 79°F/95% Transparency Conditions . Some cloud 292

Focus 495

Spectr. Temp. 73°F Dome Temp./Hum. 69°F/96%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
400/300		6.52	B2IIe	BC	830/.68	BS	IIaO-E	A	Runaway*	T=73 BROKEN 3/4" missing F=495	
							IIaO-E				
400/174	4"	6.42	B2.5IIe	"	"	"	"	B	Runaway*	cloud.	
							"	A		9:73°F F 495	cont'd
			IIaDe	Dev July 2	D19	8min	@ 68°F	Bts			

293

Date Sun.-Mon. Jul. 5/6, 198| Observers .Fl.-Ri.....

Emulsion Batches:

$8^m 68^\circ$ I a G - 02 166 - 18061

$A^m 70^\circ$ .098-02E..05931..-18061 AS 165

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Ex
45961F	Focus Test								
[illegible]	HD 184927	[illegible]	+31° 04'	[illegible]	00:57	00h 02m W	+31° 18'		
45961T ✓	optical to plates	45961			15min @ 15Volts	@ D4 3900 @ D3 4300		③ 72 4810	
45962	HD 184927	19h 31m.6	+31° 04'	01:12	04:00	03h 05m W	+31° 19'	Fe/— Ne/—	5-1- 1-9-
45962T ✓	optical top plates	45962		15min @	@ D3 15U 4810	@ D1 7U H&A	③	D2 7V 5450	
45962F	focus test					00h 03 W	+31° 19'	Fe/—	30-2

Spectr
Focus
Spect
Exp. M

Spectr. Temp. 75°F ..... Dome Temp./Hum. 72°F/44% RH Transparency Conditions Hazy, V. humid 294

Focus ... 496 .....

Spectr. Temp. 71°F ..... Dome Temp./Hum. 66°F/99% Equipment test 4/21

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RC	830/.68	RS	I-a O-E	A		T=75°; F=44%	
30/500	3"	F=7.30	B27p	"	" "	"	I-a O-E	B	Bln-He*		
							I-a O-E				
00/292	3"	B=7.30	B27p	RC	830/.9	GG13 150/.5	098-02E	A	Bln-He*	T=73°F ; F=41% uneven fog!	star sl wk comp sl str
							098-02E				
				"	830/.9	150/10	098-02E*	B		098-02 0503-07361 T=71°F F=496	OK

295

Date MON.-TUES., JUL. 6/7, 1981 Observers F.N.-R.S.

8"68° Emulsion Batches: IIaO-E....02100-27061
4"68° 098-02E....05031-18061
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45963 ✓	HD 184927	$19^h 31.^m6$	+31° 04′	22:49	00:30	$00^h 22^m$ E	+31° 14′	Fe/—	5-5-5
459639	spectral for plate	45963		15 min @ 15 Volts		① D4 3900	② D3 4300	③ P2 4810	
45963F	Focus Test					$00^h 21^m$ E	+31° 14′	Fe/—	17-17
45964	HD 184927	$19^h 31.^m6$	+31° 04′	00:40	03:56	$03^h 05^m$ W	+31° 15′	Fe/—	4-4-4
45964 ✓	spectral for plate	45964		15 min @	① D3 15U 4810	② D1 17d	70 ③	Ne/— D2 5450	8-8-8
45964F	focus test					$00^h 00^m$ W	+31° 14′	Fe/—	25-25

Spectr. Temp. 80°F ..... Dome Temp./Hum. 74°F/H=89% Transparency Conditions V. good 2.96

Focus ... 494 .....

Spectr. Temp. 73°F ..... Dome Temp./Hum. 67°F/H=84%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
00/500	3"-4"	B-7.30	B2Vp	BC	830/.68	BS	IIaO-E	A	Bln-He*		
							IIaO-E				
				"	"	"	IIaO-E	B		F=494 ; T=77°F	
00/450	3-4"	B-7.30	B2Vp	"	830/.9	GG13 150/.5	098-02E	A	Bln-He*	F=495 oth.	foggy but fine
							098-02E				
				"	830/.9	150/1.0	"	B		F=495, T=73°F	

: 297

Date Tues/Weds July 7/8 1981 Observers KK-RI

Emulsion Batches:
10" 68° IIaO e. 02100-27061
5" 69° IIaJ eb. 07119-16061 43 3.+

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45965F	Focus Test							Fe/—	25-25
45965	HD 137909	15 23	+29 27	20:45	20:48	0 38E		Fe/—	11-11
45966	HD 130948	14 45.6	+24 20	20:52	21:42	01" 39W	+24°03	Fe/—	7-7-7
45967	HD 156014	17 10.1	+14 30	21:52	21:55	00 32E		Fe/—	8-8
45968	HD 173740	18 41.7	+59 29	22:01	02:52	02"56W	+59 39	Fe/—	8-8
45968T	spectral fn plate	45965-	68.		15 min @ 15V	lite ① DC 3900	② D3 4300	③	D2 4810
45969	HD 159561	17 30 6	+12 38	02:58	03.11	04"04W	+120 37	Fe/—	12-12
45969T	spectral fn plate	45969-7	1.		15min @ D4	① 17 5V 3900	② 15V 4300	③ 15V 4810	
45970	HD 172167	18 33.5	+38 41	03:17	03:18	03 30W		Fe/—	18-18
45971	"	"	"	03:22	=03 24	03 36W		Fe/—	18-
45971F	Focus Test								

Spectr. Temp. ...82°F..... Dome Temp./Hum. ..78°F...80% Transparency Conditions ..muggy-clear.....298

Focus ....494.....

Spectr. Temp. ...78°..... Dome Temp./Hum. ..72°F...85% 40/27.5

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/-.025	BS	IIaOe	A		T = 89°F F = 494	two reel
40/50	2"	3.9	F0p	BC	"	"	"	B	Asm Sp/KKC		v sl str
/800		6	dG2	B.C.	1200/-.025	B.S	IIaOe	A	"		fine
0/31		4.4	M5Ib	"	830/.68	150/3	"	B	Std Vel.	T = 82°F F = 493	
00/225		10.6	dM5	"	830/.68	150/3	"	A	Asm-Sp/KK	Σ2398B sl. flex?	weak, but measurable
							"				
40/201		22	A5III	BC	830/.68	B.S.	IIIaJ-Fb	B	Asm-Sp/KK	T = 78°F F = 494	v sl strong
							"				
0/122		0.0	A0V	BC	1200/-.025	BS	IIaJeb	A	Ferric	F=495	strong
0/149		V	"	"	"	"	"	B	"		v strong
				"	"	"	"				conts/Red

299

Emulsion Batches:
IIa.0-e .02100-27061
.....
.....

Date Wed/Thurs. JUL. 8/9. 1981 Observers ..Fln.-Tn.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45972F	Focus TEST					00h 17m W	+15	Fe/-	15-15
45972	HD 164917	17h 0.2m	0° 51'	20:53	21:28	00h 46mE	+0 49	Fe/-	5-5
45973	HDE 226868 = CYG X-1	19h 54.6m	+34° 56'	21:45	00:45	00 21 E	+35° 14'	Fe/-	4-4-
45973F	Spot focus = 773-74			15m	DH 1hr	45 +1:0	DH +2:0		
45974	HDE 226868 - CYG X-1	19h 54.6m	+34° 56'	00:49	03h 45m	02h 39mW	+35 19	Fe/-	4-4-4

Spectr. Temp. 84.5°F ..... Dome Temp./Hum. 82°F / H=86% Transparency Conditions ... Hazy 300

Focus 491 .....

Spectr. Temp. 80°F ..... Dome Temp./Hum. 75°F / H=95%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.28	25a/2	IIaO-E	A		F=491, T=84.5°F	Cats/Rel
30/71	1"	B=5.?	G0V	"	" / "	25a/.5	IIaO-E	B	STD. VEL.		
00/163	2"-1"	B=9.74	O9.7Iab	"	"	25a/3	"	A	SB-Bln.		
							[illegible]				
/156	2"	B=9.74	O9.7Iab	"	/ "	/	IaO-E	B	St-Bln.	F=491; T=82°F	

301

Date Thurs.-Fri. JUL. 9/10, 1981 Observers F.In.-Tn.

Emulsion Batches:
10m 68° IIaO-E 02100 - 27061
5m 68° IIaO-E* 02100 - 08071

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45975F	Focus Test					00h 16m W	+15° 17′	Fe/—	12-1
45975	HD 161096	17h 38m.5	04° 37′	20:47	20:52	01h 5m E	+ 4° 34′	Fe/ND	7-7-
45976	HDE 226868=CYGX-1	19h 54m.6	+34° 56′	21:10	01:20	00h 18m W	+35 07	Fe/ND	7-7-
45976T	Spot Cal'n for 45975-77			15min @	15V D4 3900	D3 4300	D2 4810		
45977	HD 184927	19h 31m.6	+31° 04′	01:30	03:51	03h 12m W	+31° 14′	Fe/—	5-5-
45977T1	Exposure test	7½W lamp + diffuser & blue filter						FeNe/W6	10
T2	"	exposures ~ 1 min						"	10
F	Focus							"	20-2
T3	Exposure test							"	10
T4	"							"	10
T5	"							"	10
T6	Cal'n spot	3900 D4 4300 D3 4810 D2			15m @ 15V				

Spectr. Temp. 83°F..... Dome Temp./Hum. 77°F/H=87% Transparency Conditions ..Thin cloud - Thin c lear. BSQ

Focus ....491.....

Spectr. Temp. 72°F..... Dome Temp./Hum. 65°F/H=80%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	250/1.0	IIaO-E	A		F=491, T=83°F	cod VVS/Rej
10/89	3"	B-3.9	K2 III	"	" / "	250/.5	IIaO-E	A	STD. VEL.		
5/98 *	3"-5"	B-9.14	O3.7Ia+	"	" / "	250/.3	IIaO-E	A	SB-Bln.	* counts low; meas. by less	
							IIaO-E				
20/440	5"-3"	B-7.30	B2 Vp	BC	830/.68	BS	IIaO-E	B	Bln-He*	F=493, T=76°F, plate cap not functioning, hand capped	
20/50				BC	830/.68	70/1.0	IIaO-E*	A		F=493	OK
20/37					400/.38		"	B			NG
							"	D		F=493 T=71°F	
20/15					150/.5		"	A		F=496	OK
20/25					1800/.65		"	A			NG
20/75					1200/.025		"	B			NG
							"			Radium 20/13.3	

Note To KK - On Standing (next page) we found that both the Brass Lock for slit & The Slicer Comp fb lens were in place 3rd prob won't affect these tests

comp. st ele on holder

cathode exp.

Th

303

Date Fri-Sat JUL 10/11, 1981 Observers F.In.-T.In.

Emulsion Batches: IIaO-E 02100- 06071
IIaO-E 03051- 04071

5m 67° old DIG

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45978F	Focus TEST	-				00h 11m W	+00° 00'	Fe/-	17-17
45978	HD 161096	17h 38m.5	+4° 37'	20:42	20:47	01h 57m E	+4 38	Fe/-	7-7
45979	HD 167264	18h 09m.3	-20° 45'	20:52	21:57	01h 18m E	-20 39	Fe/-	5-5
45980 ✓	HD 184927	19h 31m.6	+31° 04'	22:06	00 35	00h 01m E	+31 18	Fe/-	5-5
45980T	Spot Cals	for 45978-80.			15min @ 15V	D4 3900	D3 4300	D2 4800	
45981 ✓	HD 184927	19h 31m.6	+31° 04'	00:42	03:55	03h 19m W	+31 18	Fe/-	4-4
45981T	Spot Cals	for 45981			15min @ 15V 4810	D3 7VD1 Ht	7VD3 5450		

Spectr.
Focus
Spectr.
Exp Mtr.

Spectr. Temp. 80°F..... Dome Temp./Hum. 76°F/H=65% Transparency Conditions. Fine.....30.4

Focus ....492.....

Spectr. Temp. ..73°F..... Dome Temp./Hum. 68°F/H=71%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	IIaO-E	A		F=492, T=80°F	good
0/41	3"	B=3.9	K2 III	"	" / "	"	"	A	STD. VEL.		fine
00/555	4"	B=5.45	O9.7Iab	"	" / "	"	"	B	STD-Bln.		sl strong
0/505	3"-5"	B=7.30	B2Vp	"	" / "	"	"	A	Bln-He*		sl strong
							"				
900/350	4"-6"	7.30	B2Vp	"	830/.9	GG13 150/.5	O98-02E	B	Bln-He*	T=73°F, F=476	v sl str.
							"				

305

Date Mon.-Tues., JUL. 13/14, 1981 Observers Fla.-Tw.....

Emulsion Batches:
II-a-E ... 02100 - ... 06071
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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
45982F	Focus Test					00h 07m W	00° 00′	Fe/—	17-[illegible]
45982	HD 161096	17h 38.5m	04° 37′	20:34	20:37	01 55E	+04° 35′	Fe/-	7-7
45983	HD 167264	18h 09.3m	−20° 45′	20:43	21:56	01h 07mE	−20 42	Fe/-	5-[illegible]
45983T ✓	Spot Calib. for	45982 -	86	15m @ 150		D4 3900 D3 4300 D2 4710			
45984	HD 194927	19h 31.6m	+31° 04′	22:07	22:25	02h 01mW	+31° 15′	Fe/-	5-5-
45985	HD 203064	21h 14.7m	+43° 31′	02:29	02 39	00h 31mW	+43° 51′	Fe/-	5-5-
45986	HD 201910	21h 07.5m	+40° 47′	02:41	03 56	01h 56mW	+41 07	Fe/-	5-5-

Spectr. Temp. 83°F ..... Dome Temp./Hum. 79°F / 11=68% Transparency Conditions .. Some cloud 306

Focus .. 491 .....

Spectr. Temp. 73°F ..... Dome Temp./Hum. 67°F / 11=80%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	IIa-O	A		F=491, T=83° F	
0/40	3"	B=3.9	K2 III	"	" / "	"	IIaO-E	B	STD. VEL.		fine
0/536	5"	B=5.45	O9.7 Iab	"	" / "	"	"	A	STD - Bln.		sl strong
							"				
0/334	4"	B=7.36	B2 V	"	" / "	"	"	B	Bln - He*	F=491, T=82° F; cloud v.	sl strong
0/74	2-3"	B=4.98	O8 V	"	" / "	"	"	A	RUNAWAY*	F=494, T=75° F	sl strong
0/265	3"	B=7.27	B5 V	"	" / "	"	"	B	RUNAWAY*		v sl strong

307

Emulsion Batches:
II-aO-E 02100 13071

Date Thurs-Wed. July 14-15/81 Observers Crw-Tn

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Ex
L 45987	R SER	$15^h46^m.1$	$15°26'$	21:03	23:28	2 51 W	$15°12'$	Fe/—	55
45987T	Spot Calib	for 45987	-90	15 min @	15V 3900 04	4300 D3	4810 D2		
45988	RT CYG	$19^h40^m.8$	$48°32'$	23:33	02 08	1 39W	$48°42'$	Fe/—	55
45989	KZP 5468	$21^h41^m.4$	$-2°40'$	2:22	03 14	0 42W	$-2°17$	Fe/—	555
45990	EU DEL	$20^h33^m.4$	$17°55'$	3:18	04 01	2 38W	$+18°12'$	"	55

Spectr. Temp. ...72°F..... Dome Temp./Hum. 65°F/H=86% Transparency Conditions ...CIRRUS/CLEAR...1308

Focus .....4.95.....

Spectr. Temp. ...66°F..... Dome Temp./Hum. 61°F/H=97%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30/430	4"	8.4	M6e-M8e	BC	830/0.68	150/.3	IIaO-E	A	Cow-MIRAS	EXP = 145m	
							IIIaO-E				
30/350	3"	9.1	M2e-M4e	"	"	"	IIaO-E	B	"	EXP = 155m	
30/415	3"	7.9	M III	"	"	"	"	A	Cow-Std	Set 497 T. 67 / EXP = 52m	
30/200	3"-5"	7.8	M6 III	"	"	"	"	B	Cow-Std	EXP = 43m	

309

Date Wed-Thurs July 15-16 Observers Rm/Tn

$8^m 68^0$ Emulsion Batches: IIaO-E 02100 — 13071

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Ex
45991F	Focus Test					0 20W	-00 00	Fe/—	15-15
45991	HD 161096	$17^h 38.5$	$+4^0 37$	20:34	20 37	1 48 E	$+04^0 34$	Fe/—	7-7
45992	HD162714=γ Oph	$17^h 47.3$	$-0^0 07$	20:46	23:37	1 04W	-06^0 [illegible]	h	55-
45992T ✓	Spot Calib for 45991-98			15 min @	15v	D4 3900	D3 4300	D2 [illegible]	
45993	HD 166008=5UCyg	$18^h 10.2$	$+29^0 01$	23:41	01 07	$0^h 41$ W	$+29^0 10$	Fe/—	5-5-
45994	HD 171635=45Dra	$18^h 30.9$	$+58^0 58$	01:11	01 24	02 11W	+56 05	Fe/—	7-
45995	HD 175175=41Cyg	$20^h 25.3$	$+30^0 2$	01:28	01 34	00 21W	+30 14	Fe/—	7-
45996	HD 179370=36Cyg	$20^h 14.8$	$+34^0 40$	01:38	02 02	01 03W	+34 53	Fe/—	7-
45997	HD 180323=HR7328	$19^h 12.0$	$+57^0 45$	02:05	03 14	03 17W	+57 52	Fe/—	5-5
45998	HD 203[illegible]	21 15.4	$+37^0 49$	03:18	04 04	02 05W	+38 08	Fe/—	7-

Spectr. Temp. 75° ..... Dome Temp./Hum. +68°/69% Transparency Conditions ..Fine - sl. hazy..310

Focus .....495.....

Spectr. Temp. ..67..... Dome Temp./Hum. +61°/90%. NEW D19

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/68	BS	IIaO	A		T = 75°F Focus 495	
40/40	2°	3.9	39	BC	"	"	IIaOE	B	std Vel		
90/1500	1-2°	7.0	F516	"	"	"	"	A	Cyph/Evans		
							IIaOE				
700/700	1-2°	6.9	F0	"	830/68	BS	"	B	Cyph/Evans	T=72°F	
70/61		5.5	F2b	"	"	"	"	A	Cyph/Evans		
/58		4.4	F2	"	"	"	"	B	Cyph/Evans	T: 70°	
/70	1-2°	5.9	F516	"	"	"	"	A	Cyph/Evans		
90/135		5.7	F2b	"	"	"	"	B	Cyph/Evans		fine
/68	1-2°	6.9	F2	"	"	"	"	A	Cyph/Evans		sl str.

311

Date Thurs-Fri, July 16/17 Observers Tn - Fd

Emulsion Batches: 8m 68° IIa-O-E 02100 25071

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
1 45999	Focus Test							Fe/ NO FILTER	17-17
45999	HD 121370	13 49.9	+18 54	20:30	20:35	2 05W	+18 32	Fe/-	11-11
46000	HD 137909	15 23.7	+29 27	20:40	20:45	0 40W	+29 09	" / "	11-11
46001	HD 8890 A	1 22.6	+88 46	20:58	21:00	10 00E	+89 10	Fe/-	11-11
46002	HD 8890 B	"	"	23:40	3:07	4 10E	+89 12	Fe/-	5-5-5
46002T ✓	Spot Calc Fe	45999 — 46005		15 min	@ 15V	D4 3400	D3 4.00	D2 4576	
46003	HD 217782	22 58.0	+42 13	3:20	3:30	0 09E	+42 37	Fe/-	7-7
46004	HD 217675	22 57.3	+41 47	3:33	3:37	0 00	+42 11	" / "	7-7
46005	HD 222368	23 34.8	+ 5 05	3:41	3:47	0 27E	+ 5 32	" / "	7-7

Spectr. Temp. ....76°F..... Dome Temp./Hum. +71°F/72% Transparency Conditions . Fine...occasional cloud...312

Focus .....495.....

Spectr. Temp. ....69°F..... Dome Temp./Hum. +63°F/89%

At 3130Å a very brt rapidly varying, concentrated line is against a brt sky

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/-.025	BS	IIaO	A			
40/50	1"	3.27	GO	"	"	"	IIaO-E	B	Asm Sp/KK	exp. uneven red end poor focus	
40/50	1"	3.93	FOp	"	"	"	"	A	Asm Sp/KK		
40/58	1"	2	F	"	"	"	IIaO-E	B	Asm Sp/KK		v sl str
00/180*	1 1/3"	8.6	E	"	830/.68	150/3	"	A	Asm Sp/KK	*uncertain Exp meter	
							"				
20/10	1"	5.7	A2	BC	830/.68	BS	"	B	Asm Sp KK	T-69°F	fine
10/39	1"	3.6	B6p	"	"	"	"	A	"		v sl strong
10/40	3"	4.6	F7V	"	830/.68	"	"	B	ST. VEL.		fine

313 Using Ry's Newtonian (CFHT) Spetrograph + Hr and Dave Blythe

Emulsion Batches: .....

Date Tues-Wed July 21-22 Observers [illegible]-Tm-Myd .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
46006	HD 159561 α Oph	17 30.3	+12 38	21 13.5	21 22				5 min
46007	HD 160365	17 34.4	+13 2[illegible]	21 53:30	22 05:30	Trail Time 2 min 20 sec	47.35	47 25	5 min Comp
"	"	"	"	22 43:30	23;20:20	"	To	25 45	5 min Comp
"	HD 185758	1935.6	+17°47	23:44	1:00		18°00.7	5 35	5 min Comp
"	HD 204867	21 26.3	-6°01	1:12	1:36	0 11E	-5°38		5 min comp
46008	HD 209750	22 00.6	-00 48	1:57	≈ Approx 2:40		-0 22 to	56 00	5 min
"	HD 206459	21 39.8	+16°53	2:46	3 46		+17°18		

Spectr. Temp. ..... Dome Temp./Hum. +65°F / 90% Transparency Conditions .. Fine 314

Focus ..... was 99%

Spectr. Temp. ..... Dome Temp./Hum. +55°F / 93%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
- 160s doubling	8-10 poor?	2.23	5sec → 160sec series				exposures (doubling each exp)			65°F c	80 secs good exp.
- 160s doubling	5"						IIa-O				
1 - 8 Trails doubling	6		2min 20sec →		18min 40sec		"		Preliminary Tests		
40s 37m 9 20 1	6"-8"	~5.	G1				"			some thin cloud	18 min ok
1m 3 20	8"	3.7	G0				"			transparency down to at least 1/2 max last = 58°F	4.0 min ok
1m 40m 9 20 18 40	10"	3.91	G2IIb				"				
40m	8-10"	5.5	G5				"			Turn off. Photometric Star	

315

P.S. ①

Date Wed-Thurs July 22-23 1981 Observers [illegible] - Ri - Bl

Emulsion Batches: .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
46009	HD 150680	16 37.5	+31°47	20:56 10m 38	20:56 47		+31°42	No	1m
"	"	"	"	20 56 47 20m	20 57 07		"		
"	"	"	"	20 57:07 40m	20:57:47		"		
"	"	"	"	20.57:47 80m	20:59 07		"		
"	"	"	"	20 59 07 160m	21:02 47	00h 10 W	"		
"	"	"	"	21:07:44	21:07:17		"		
"	"	"	"	21:07:59	21.13:59		"		
"	HD 157999	17 21.5	+04°14'	21:20:41 20m	21:42:09	00h 02 W	+04 12'		
"	HD 160 365	17 34.4	+13° 23'	21 46.53 30m	22.16:00	00h 24W	+13° 23		
"	comparison							No	1m
46010	HD161096	17 38.5	+04°37'	22:38.10	22,50:38	00h 54	+04 38'	No	1m
"	HD161797	17 42 5	+27°47	22,54:40	23,07:29	01h 07 W	+27°47		
"	HD165760	18 02.5	+08°43	23:23.30	23:38 16	01h 18W	+08 47		
"	HD169414	18 19.4	+21°43	23:42:00	23:57:12	01h 20 W	+21°48		
"	HD 173764	18 41.9	-04 51'	00:04 18	00:18 37	01h 18 W	-04°41		

Spectr. Temp. ..... Dome Temp./Hum. ...64°F...79% Transparency Conditions ....good..... 316

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. ~~Min.~~	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	6"	3.48	G0 IV	NEWTON Spectr	1200/4.10	50µ/1.2m	IIaO		Mk-Std + H	F = 3-4	
		"	"	"		"			"		
		"	"	"		"			"		
		"	"	"		"			"		
		"	"	"		"			"		
		"	"	"		"			"		
		"	"	"		"			"		
	6"	5.8	K2 II	"		"	IIaO				
	5	6.8	K6 III	"		50µ/1.2m	IIaO				
							IIaO				
4m	6	3.93	K2 III	NEWTON SPECTR	1200/4.10	50µ/1.2	IIaO				
4m		4.20	G5 IV	"	1200/4.10	50µ/1.2	IIaO				
5m		5.44	G8 III	"	"	"	"				
5m	6	5.02	K2.5 IIIab	"	"	"	"				
14m		5.32	G4 II CN1	"	"	"	"				

317 Pg. 2

Date Thurs. July 23, 1981 Observers ...A.H.-R.....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
46010	HD 184406	19h29.2	+07° 10	00:21:15	00:50:	01h 03w	+07° 24		
"	HD 185758	19 35.6	+17° 47	00:57:38	01:41:38	01h 18w	+18°02		
"	HD 185958	19 36.5	+17° 15'	01:13:40	01:27:40	01h 34w	+17°29'		
"	HD 186791	19 41.5	+10°22	01:30:20	01:38:05	01h 39w	+10°37'		
"	HD 188512	1950.4	+06° 09	01:41:15	01:49:19	01h 41w	+06° 24		
"	HD 192713	20 11.2	+23° 12'	01:52:11	02:58:30	02h 22w	+23° 30	Ne	1 mm
46011	HD 203504	21 17.5	+19° 23	03:00:04	03:14:22	01h 40 w	+19° 46	Ne	1 mm
"	HD 209750	22 00.6	−00°48	03:17:49	03:24:45	01h 06w	−00° 20'		
"	HD 216131	22 45.2	+24° 04	03:28:36	03:36:21	00h 34w	+24° 34		
"	"	"	"	03:37:04	03:45:04	00h 42w	"		
"	"	"	"	03:46:06	03:53:38	00h 51w	"		
"	"	"	"	03:54:13	04:02:00	00h 59w	"		
"	comparison							Ne	1 mm

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .... good ..... 318.

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 55°F 93%

Exp. ~~Min.~~	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
9 min	6"	5.60	K3 IIIb	NEWTON SPECTR.	1200/4.10	50µ/1.2	IIaO		MK. ST. 1 & 8	F=3-4	
14 min	"	5.17	G1 II	"	"	"	"		"		
14 min	"	5.17	G9 IIIa CN2	"	"	"	"		"		
8 min	"	4.23	K3 II	"	"	"	"		"		
9 min	"	4.52	G8 IV	"	"	"	"		"		
58 min	"	6.67	G3p Ib-II	"	"	"	"		"		
14 min		5.19	K1 III	"	"	"	"		"		
7 min	10	3.91	G2 Ib	"	"	"	"		"		
3 min	"	4.41	G8 III	"	"	"	"		"		
3 min	"	"	"	"	1200/4.15	"	"		"		
7½ min	"	"	"	"	"	"	"		"	F=6-4	
2 min	"	"	"	"	"	"	"		"	F=9-4	
				"	"	"	"		"	"	

319

Emulsion Batches:

Date Thurs Fri July 23-24 Observers A-R.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	collimation test at beginning of night A-R.-KK-BI								
46012	HD 165760	18 02.5	+08°43	23:12:34	23:2?:31	01ᴴ 10W	+08°55	Ne	1m
"	HD 190406	19 59.7	+16°48	23:36:40	00:09:32	00ᴴ04E	+17°10'		
"	HD 196755	20 34.3	+9 44'	00:12:15	00:30.16	00ᴴ 18E	+10°11		
"	HD 204867	21ᴴ26.3	-06°01'	00:35:08	00:40:34	01ᴴ00 E	-05 30		
"	HD 206778	21 39.3	+09°25'	00:43:33	00:49.52	01ᴴ03E	+09 57		
"	HD 206859	21:39.8	+16°53	00:53:46	01 11 40	00ᴴ42E	+17°25'		
"	HD 207089	21 41.5	+22°29	01:20:27	01:50.44	00ᴴ05E	+23°01		
"	HD 217014	22 52.5	+20°14	01:54:30	02:2?48	00ᴴ39E	+20°49'	Ne	30sec
46013	HD 210027	22 02.3	+24°51	02 41.14	02:53 14	00ᴴ36W	+25°24	Ne	30 sec
"	HD 214923	22 36.5	+10°19'	02:57.04	03:07:09	00ᴴ16W	+10°52		
"	HD 222368	23 34.7	+05°05'	03:11.25	03:2?:41	00ᴴ28E	+05°41		
"	HD 3651	00 34.2	+20°43	03:28:38	03:49:05	00ᴴ59E	+21°17		
"	comparison							Ne	30 sec

Spectr. Temp. ..... Dome Temp./Hum. 64°F 7% Transparency Conditions .. cirrus 320

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 60°F 73%

Exp. Min.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
5m 5min	3	5.44	G8III	NEWTON. SPECTR	1200/4.15	50μ/120	IIaO		MK-STD n1	F9-4	
10m 10min	2	6.4	G1V	"	"	"	"		Hadop Std	cirrus clouds	
5m 10min 2min		5.8	G5IV	"	"	"	"		"		
0m 2min		3.73	G0Ib	"	"	"	"		MK STD n1		
2=80s 60s 5min		3.98	K2Ib	"	"	"	"		"		
5m 5min	3	5.54	G5Ib	"	"	"	"		"		
3m		6.70	K0I6	"	"	"	"		"		
2m 2m		6.2	G4V	"	"	"	"		Hadop std		
80s 80s 5min		4.20	F5V	"	"	"	"		MK STD n1		
1m 5min	4-5	3.57	B8V	"	"	"	"		"		
2m 2m 2m	5	4.64	F7V	"	"	"	"		"		
20min	3	6.70	K0V	"	"	"	"		"		

321

'81

Date Fri-Sat July 24-25 Observers Ra-Ri

Emulsion Batches:
I120 05031 13.07
05031 15.071

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
46 19F								Fe/—	15-1
46019	HD 161076	17h 38.5	+4° 37	20 23	20 27	01h 22E	+4° 35	Fe/—	7-7
46015	HD 180583=HR 7308	19h 12.0	+27° 45	20 32	21 35	01 46E	+27 54	Fe/—	5-5
46015T ✓	Spot Calib for	46014 –	46017		15 min @ 15V	D4 3900	D3 4300	D4	
46016	HD 186688=SAO 125	19h 40.8	+29° 01	21: 41	00 : 57	01h 03W	+29° 14	Fe/—	5-5
46017	HD 187927=η Aql	19h 47.4	+00° 49.9	01 : 11	01 : 16	01h 19	+00° 58	Fe/—	7-7
46018 ←	HD 187929=11 Aql	19h 47.4	+00° 49.9	01 : 17	01 24	01 30W	+00° 53	Fe/—	7 7
46018T ✓	Spot calib for 46018—			15 min @ 15		D4 3930	D3 4300	D4	
46018 ←	HD 195295=91 Cyg	20h 25.3	+38° 2	01:31	01 34	01 04W	+38° 11	Fe/—	7-7
46019	HD 201867=β Aqr	21h 26.3	-6° 1'	01 37	01 41	00 05W	-05° 39	Fe/—	7-7
46020	HD 207538=κ Aqr	21h 46	-0° 48	01: 43	01 47	00 37E	-00 29	Fe/—	7-7
46021	HD 197624=7 Vul	20h 47.2	+27° 52	01: 50	02 37	01 41W	+28° 12	Fe/—	5-5
46022	HD=03[illegible]=HR 115[illegible]	21h 1.9	+35° 19	02: 40	03:27	02h 03W	+36° 04	Fe/—	5-5
46023	HD 180583=HR 7308	19h 12.0	+27° 45	03: 30	03 40		+27° 54	Fe/—	5

Spectr. Temp. ....71°F..... Dome Temp./Hum. 68°F./55% Transparency Conditions ..Cirrus & hazy..... 322

Focus .....

Spectr. Temp. ....66°F. F498 Dome Temp./Hum. 62°F./..100% 40/28

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	IIaOE	B		T710F F 496	
7-9/35		3.9	KZIL	BC	830/.68	BS	IIaOE	A	S/d Vel		
8-9/360	3	6.7	FGIL	BC	"	"	"	B	Ceph/Evans		
							"				
15-20/700	3	2.70	2G0	B.C	830/.68	BS.	"	A	Ceph/Evans	some cirrus	
20-25/25		4.1-5.4	FGIL G2Ib	"	"	"	"	B	Ceph/Evans	T 67°F F 497	
25-30/50		"	"	"	"	"	"	A	Ceph/Evans	T 67°F F 498	
30-31/20		4.-	F5IL	"	"	"	"	B	Ceph/Evans		
31-32/30		3.7	G2Ib	"	"	"	"	A	Ceph/Evans		
32-33/30		3.7	G2Ib	"	"	"	"	B	Ceph/Evans		
33-34/70L		5.9-6.7	F5Ib-G2Ib	"	"	"	"	A	Ceph/Evans		
34-35/250		5.1	F2	"	"	"	"	B	Ceph/Evans		
35-36/10		6.7	F5Ib	"	"	"	"	A	Ceph/Evans	clouds passed by	

323

Emulsion Batches:

Date July 25/26 Observers Wh/Ri

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
46022 F_1	Focus							nc/ND	5/5
23 F_2	"							"	10/10
27 F_3	"							"	20/20

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... Fog: 304

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

did not open - test exposure only -

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					1200/ .55°	150/ .5	IIaD		Image tube eng.		SC St
					"		"		Test of field flattener		fair
					"		"				SL. w/c

325

8m 68s

Emulsion Batches:
Tech-E 05031 - 15071
HJR G-1143 - 033 - 03

Date Sun. Mon. July 26 27 Observers G. R.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
46023F1	focus test			-				Fe/—	15-15
46023	SU Cyg HD 186688	19 40.8	+29° 01	20:39	22:16	01m26 E	+29°12	Fe/-	5-5
46023F1	spectral for plate	46023		15min @	15 volts @	D4 @ 3900	D3 @ 4300	+2 4810	
46024	HD 213307 Disp	22 25.5	+57 54	22.25	00:54	01 32 E	58° 15'	Ne/-	60-a
46024F1	"pit drill" for plate @	46024-25		7½V	15 MIN 7660	D4 3 comin 4464	D3		
46025	HD 192989 Disp	19 47.4	+00 45	01:02	03:06	03 17 W	+00° 55'	Ne/-	2m-20
46025F	focus test								

Spectr.
Focus
Spectr.
Exp Mir

Spectr. Temp. 73°F Dome Temp./Hum. 68°F 95% Transparency Conditions 32.6

Focus 496

Spectr. Temp. Dome Temp./Hum. 60°F 99% 40/27

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B.C	830/.680	B.S.	IIaO-E	A		T=73°F F=496	
400/360		6.87-7.66	FO G1	B.C.	830/.680	B.S.	IIaO E	B	Eyph/Evans		
							IIaO-E				
/325	2-3"	~3.7	eph	B.C.	830/.900	V FILTER 150/.3	HIE	A	IR eph		
/44	3-5	~3.5	eph	"	"	"	"	B	"	T=69°F T=497	
						130/1.0		A		clouds - termination T=67°F F=497	

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Emulsion Batches:

Date Tues Wed July 28-29 Observers WH-R.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
46025F2	focus test							Ne/ND	5-5
"	"							"	10 "
"	"							"	20 "
46025F3	"							"	10 "
"	"							"	10
"	"							"	10
"	"							"	1

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... raining ..... J2d.

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B.C.1	120/.55	100/.5	IIaD	1		Developed by wh	
				B.C.+1T	"	"	"	2			
				"	"	"	"	3			
				"	"	"	"	1		flat Developed by Wh.	
				"	"	"	"	2		.025 shim on South side shim & reformed	
				"	"	"	"	3		.049 " "	
				"	"	"	"	5		.025 shim on West side shim reformed	
				Whoever assigns my engineering nights has a sick sense of humour! Wh.							

Department of Physics

329

Date 1981 July 29/30 Observers KK-Ri

Emulsion Batches:
IIaG 05031-25071 26 201
IIIaJ 09061-14071 56 3+
098-02E 05031-07071 71 226

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
46026F	focus test								
46026	HD 137909	15 23.7	+ 29 27	20:20	20:26	01h 12W	+2909	Fe/—	11-11
46027	HD 159561	17 30.3	+ 12° 38	20:29	20:36	00 44E		Fe/—	12-12
46028	HD 172167	18 33.5	+ 38 41	20:40	20:41	01h 41E		Fe/—	18-18
46029	HD 172167	"	"	20:42	20:43	01 39E		Fe/—	18-18
46030	HD 173740	18 4.7 (41.8)	+59° 29	20:59	00:59	02 30W	+59° 35	Fe/—	3-3
46030T1	spot cal for plate 46026, 31-39			15min @ 15Volts		① D1 3900	② D3 4300 ③	D2 4810	
46030T2	spot cal for plate 46027-29			15min @ D4		① 17.5V 3900	② 15V 4300 ③	15V 4810	
46030T3	spot cal for plate 46030			15min @		① 15V D3 4810	② 7V D1 Hα ③	7V D2 5450	
46031	HD 202109	21 8.7	+29 19	01:08	01:30	00 32W	+30°08	Fe/—	11-10
46032	HD 215182	22 38.3	+29 42	01:32	01:49	00 38E	+30° 06		
46033	HD 3712	0 34.8	+55 59	01:58	01.59	02 25E	+56°26	Fe/—	11-11
46034	HD 6582	1 01.6	+ 54 26	02:03	02:34	02 18E	+54°49	Fe/—	7-7
46035	HD 6961	1 05.0	+ 54 37	02:37	02:47	02 08E		Fe/—	11-11
46036	HD 18925	2 57.6	+ 53 25	02:50	02:55	03 54E	+53 25	Fe/—	11-1
			+ 53 07						

Spectr. Temp. 68° Dome Temp./Hum. 64°F(18°C)70% Transparency Conditions . V. clear 330

Focus 497

Spectr. Temp. Dome Temp./Hum. 40/27

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/-.025	BS	IIaE	A		V sl	red
0/50	2"	3.73	F0p	"	"	"	IIaE	B	Asm-Sp/KK		fine
0/200		2.2	A5 III	"	"	"	IIIaJ eb	A	Asm-Sp/KK		sl. strong
0/60		0.0	A0V	"	"	"	IIIaJ eb	B	Fennie		strong
0/61		"	"	"	"	"	IIIaJ eb	A	"		strong
0/280		V= 9.69	dM5		1200/.70	250/.3	098-02	B	Asm Sp KK	F=498 T: 67°F	
							IIaO-E				
							IIIaJ eb				
							098-02				
0/200			G8 III	B.C.	1200/.200	150/.5	IIaO-E	A	Spec Std.	F=498 T=65°F	fine
0/200		3.8	G8III?	"	"	"	"	B	Asm Spec KK		fine
0/60		2.5	KOIIIa	"	1200/-.025	BS	"	A	Std Vel.		
0/300		5.81	G5Vp	"	"	"	"	B	Asm Spec/KK		v sl str
0/50		4.50	A7V	"	"	"	"	A	Asm Spec/KK		
0/60		2.5	G9 III-IV	"	"	"	"	B	Asm Spec/KK		

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Emulsion Batches:

Date 1981 July 29/30 (cont) Observers KIC-Ri

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.	Spectr. Exp. Mir.
46037	HD 217782	22 58.0	+42 13	03:00	03:18	00 31 W		Fe/—	7-7-7	1/125
46038	HD 217675	22 57.3	+41 47	03:20	03:25	00 38W	+42 13	Fe/—	11-11	50
46039	HD 219150	23 08.6	+ 1 39	03:30	04:22	0 23 W	+02°06	Fe/—	5-5-	4
46039F	focus test							Fe/—	15-	

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .. still very clear ... 832

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .. 60°F 78%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/250	4"	5.17	A2	BC	1200/-.025	BS	IIaOe	A	Asm Sp/ICK	wind shake	fine
U/50		3.6	B6p	"	"	"	"	B	Asm Sp/ICK		v sl str.
00/164		7.57	F0	"	830/.68	"	"	A	Fernie	F=497 T=644	v sl weak
											sl weak

Date 1981 July 30/31 Observers Gu-Ri

Emulsion Batches: 8m68 HIE G4143-033-03 13 79
baked in forming gas...
3½ hrs @ 65°C

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
46040	HD 124897 (α Boo)	14 11.1	+19 42	20:20	20:23	02 26W	+19 15	Ne/	60-60
46041	HD 187929 (ν Aql)	19 47.4	+00 45	20:29	22:37	00 56E	-00 56	Ne/	60-60-6
46041T	Spot calib for plates	46040 - 45			(@ 7½V)	10 min D4 76 80		30 min D3 8464	
46042	HD 195295 (41 Cyg)	20 25.3	+30 02	22 49	00:47	00 37W	+30° 18	Ne/	60 60 60
46043	HD 216759 (ζ Peg)	21 39.6	+16 53	00:57	02:26	01 02W	+17° 14	Ne/	60-60 (
46044	HD 204867 (β Cap)	21 26.3	-06 01	02:34	03:25	02 14W	-05 40	Ne/	60-60 60
46045	HD 209750 (ω Aqr)	22 00.6	-00 48	03:29	04:09	02 24W	-00 25	Ne/	60-60 (

Spectr. Temp. 74°F Dome Temp./Hum. 70°F 76% Transparency Conditions good with some clouds 334
Focus 496 around midnight
Spectr. Temp. 68°F Dome Temp./Hum. 62°F 85% 40/27

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2/70	2-3"	1.29	K2IIp	BC	830/1900	15μ/3	HIE bfg	A	Std Vel.	'V' filter	strong
1/60	2"	4.1	cephs	"	"	"	"	B	IR Cepheids		s/weak
										some cloud begins	
0/381	2"	4.0	F5II	"	"	"	"	A	IR Cepheids	more cloud	s/weak
1/320	1-2"	4.3	G5Ib	"	"	"	"	B	IR Cepheids	F=478 T=71°F	s/weak
1/170	"	2.9	G0Ib	"	"	"	"	A	IR Cepheids	F=497 T=70°F	good
1/160	"	2.9	G2Ib	"	"	"	"	B	IR Cepheids		good

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Date Fri/Sat July 31/Aug. 1. 1981 Observers ...Wh./Ri.....

8m 68° Emulsion Batches:
4m 68° ~~H103-E.~~ 05031 - 29071 20 188
4m 68° ~~U98-01-E.~~ 05031 - 29071 31 176
4m 68° 29151 5D 35°C

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
46046F	Focus	—	—					Fe/—	15-15
46046	V1016 Cyg	19h53m.6	+39°33'.2	20h44m	22h16m			Fe/ND	7-7-7
46047	" "	"	"	22h25m	00; 00	00h25W	+39°46	Fe/—	3-3
								ne/—	7-7
46047T1	spectral fn plate	46046	15min @ 150volts		① D4 3900	② D3 4300	③	D2 4010	
46047T2	spectral fn plate	46047	15min @		① D3 5volts 4810	② D1 7volts Hd		③ D2 7volt 5950	
46048	SU Cyg Fund Comparison #1	19 40.6	+29° 01	0h38m	01h38	2h15W	+29°13'	Ne/ND	10-8-5
46048F	focus tilt							NF/ND	10-10
46049	HD212943	22h22m.8	+4°12'	1h50m	2h00m	0h5mE	+04°36	NE/ND	12-12
"	HD223311	23h43.4	-6°56'	2h06m	2h45m	1h20mE	-06°28	Ne/ND	12-12
"	focus tilt							Ne/ND	20-20
46050	HD222368	23h34.8	+5°05	2h57m	3h04m	0h15mE	+05°32	Ne/ND	12-12
	"	"	"	3h05m	3h08m			Ne/ND	12-12
	"	"	"	3h09m	3h11m			Ne/ND	12/12
	Focus.	—	—						

Spectr. Temp. ....76°F..... Dome Temp./Hum. ..79°F..60% Transparency Conditions ....Clear.....336.

Focus .....495.....

Spectr. Temp. ....79°F..... Dome Temp./Hum. ..... seeing: excellent! winds calm 90/26

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
—				BC.	850/.68	150/1.0	IIaDe	A			
50/63	1-2	10.4	[e]	"	"	250/.5 GG13	"	B		Timed exposures 1m - 30min.	emission only
50/46		"	"	"	1200/.700	250/.5	098026	A		"	
							IIa-E				
					~~1225~~		098-02E				
00/25	1-2	~11	?	BC + I.T.	1200/.475	150/.5	2415b	2	faint * Test + Rm prog.	1025 shim on east side Timed exposure - 1 hr.	
				"	"	"	"	1			
0/75	1-2	5.9	KOIII-IV	"	1200/.475	150/.5	2415b	1	STD Velocity	I.T Test	
50/75		6.3	gK4	"	"	"	"	2	"	"	
		"		"	"	"	"	3		"	
00/75		4.6	F7II	"	"	"	"	1	Std Vel	Developed by WCs 4m	sl strong
00 38		"	"	"	"	"		2	"	Hα Too close to edge 3 shim has moved spectrum.	fine
200/19		"	"					3	"		good
								4			

337

Emulsion Batches:

Date July 31/Aug 1 Observers W.h./R.i.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
46051	HD 212943	$22^h 22.8$	$+4^\circ 12'$	$3^h 55^m$	04:03	$01^h 59^m W$	+04 36	Ne/ND	12-12
52?	HD 222368	$23^h 34.8$	$+5^\circ 05'$	09:07	$4^h 12^m$	$0^h 55^m W$	-	No/ND	12 -
	Focus	-	-					Ne/ND	20-2:

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... Very Clear 338

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 67°F/80%

seeing still excellent. wind calm.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
00/38	1-2"	5.9	KO III-V	B.C + IT	1200/.519	150/.5	2415 b	1	S.J. - Vul	I.T. Test	
10/38		4.6	F7 V	"	1200/.519	"	"	2	"	Check tilt agnst Posn of Hα (tilt ok)	
—											

339

Date Sat.-Sun. AUG 1/2. 1981 · Observers Fln.-Bts.....

8m 65° Emulsion Batches:
IIaO-E..0502!..25071. 21 183
IIaO-E..05031..27071.
4m 65° 098-02E.05031..29071. 36

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
53F	focus							Fe/-	15-15
46053	HD 184927	19h 31.6m	+31° 04'	20:32	23:29	00h 20m W	+31° 18'	Fe/-	5-5-5
53T ✓	cal plate for	46053-		15min 15V	(1) D4 3900	(2) D3 4300	(3) D2 4810		
46054	HD 184927	19h 31.6m	+31° 04'	23:43	03:13	4h 05m W	+31° 18'	Fe/- Ne/-	4---4 8-?-?
54T ✓	cal plate for	46054		15min	(1) D1 7V H2	(2) D3 15V 3900	(3) D3 15V 4300		
46055	HD 210839	22h 08.1m	+58° 55'	03:48	05:15	02h 30m W	+59° 21'	Fe/-	11-11

Spectr. Temp. 77°F..... Dome Temp./Hum. 74°F./H=67% Transparency Conditions Some high cirrus., sl. haz / 340
sky bright.

Focus ....495.....

Spectr. Temp. 70°F..... Dome Temp./Hum. 65°F./H=91%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	IIaOe	A		F=495, T=77°F	
30/550	2"	B= 7.30	B2IIIp	"	" / "	"	"	A	Bin-He *	new box of plates (27071)	v sl str
							IIaOe				
00/153 *	3-4	B= 7.30	B2Vp	BC	530/.9	GG13 150/.5	098o2e	B	Bin-He *	broken (2 pcs) * correct price not to mine / F=495, T=75°F;	star good comp strong
							0802e				
70/35		B= 5.29	O6f	BC	53[illegible]/.68	BS	IIaOe	A	RUNNEY *	F=496, T=72°F	~~str good~~ fair ~~comp~~.

341

Date Aug. 3/4 Mon Tues Observers Ri Are

8m 68° Emulsion Batches: IIaO 05031 - 27071 ... 20 189

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
46056F	focus test							Fe/-	15-15
46056	HD 186688 (50 Cyg)	19 40.8	+29° 01	20 15	21:19	01h 51E	+29° 12	Fe/-	5-5-5
46056T	spectral type plate	46056		15 min @ 15 U/mm		① D4 3900 ② D3 4300 ③ D2 4810			
46057	HD 176155	18 53.8	+17° 19	21:25	22:05	0h 19E	+17° 18	Fe/-	5-5-5
46058	HD 180383	19 12.0	+27° 45	22:10	23 40		+27 52	Fe/	5-5-5
46059	HD 206778	21 39.3	+9° 25	23:43	23:49	1h 20 E	+09 45 2	Fe/	7-7

Spectr. Temp. 75°F Dome Temp./Hum. 72°F 91% Transparency Conditions hazy & humid 342

Focus 496

Spectr. Temp. 74°F Dome Temp./Hum. 68°F 100% 40/25

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B.C	830/.68	13.5	IIaO-E	B			
30/360	1-2	6.9-7.7	F0-G1	B.C.	830/.680	B.S.	IIaO-E	A			
							IIaO-E				
20/180		5.4	F5	BC.		BS	IIaO-E	B	Ariz Prog		fair
30/360	3-4	5.93	F6IIIb	BC		BS	IIaO-E	A	Ariz Progs	closed up getting	good
60/36		2.39	K2Ib	BC		BS	IIaO-E	B	SLS Vol	to foggy outside	good

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$8^m 6^s$

Emulsion Batches: Tec-E 05031 - 03081 21 195

Date Aug. 5-6 Wed/Thurs Observers A.S. - R.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
+6060F	focus test							Fe/-	15 15
46060	HD 186688 (SUCrys)	19 40.6	+29° 01	20:15	21:56	$1^h 06^m$ E	+29°12	Fe/-	5-5
46060+	optical flat plate	46060-		15 min @ 15 Volts		① D1 3980 ② D3 4300		③ D2 4810	
46061	HD 176155	18 53.8	+17° 14'	21:59	22:24	$0^h 07$ W	+17° 18.4	Fe/-	5-5
46062	HD 179315	19 7.0	+4 11	22:29	23:05	$0^h 35$ W	4 17.9	Fe/-	5-10
46063	HD 180583	$19^h 12.0$	+27° 45	23:09	23:56	$01^h 22$ W	+27 53.8	Fe/-	5-5
46064	HD 201078	$21^h 02.3$	+30° 47	00:00	00:30	$00^h 05$ W	+31 09.1	Fe/-	5 5
46065	HD 203156	21 15.4	+37°49	00:38	01:12	$00^h 35$ W	+37 07.3	Fe/-	5-5
46066	HD 204867	21 26.3	−06 01	01:16	01:20	$00^h 31$ W	−5° 40.5	Fe/-	7-7
46067	HD 206778	21 39.3	+9 25	01:23	01:25	$00^h 23$ W	+9° 46.0	Fe/-	7-7
46068	HD 217476	$22^h 55.9$	+56° 25	01:31	01:47	$00^h 30$ E	+56° 49.4	Fe/-	5-5
46069	HD 224014	$23^h 49.4$	56 57	01:51	02.01	$01^h 10$ E	+57° 22.3	Fe/-	5-5
46070	HD 7927	$1^h 13.7$	57° 42	02:06	02:18	$02^h 19$ E	58 04.8	Fe/-	5-5
46071	HD 14662	2 16.9	54 55	02:22	03:13	02 27 E	55 13.6	Fe/-	5-5
46072	HD [illegible]	1 22.6	88° 46	03:22	03:23	02 13 E	+88°08.1	Fe/-	7-7
46073	HD 203156	21 15.4	+37° 49	03:34	04:28	03 52 W	+36° 08.0	Fe/-	5-5

Spectr. Temp. ....76°F..... Dome Temp./Hum. ..70°F....75% Transparency Conditions ..good with some cirrus around w. & south

Focus .....49.5.....

Spectr. Temp. .....68°F..... Dome Temp./Hum. ..62°F....94% 10/26

344

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B.C	830/.680	B.S	IIaO-E	A			
4 ex/360	3-4	6.9 7.7	F0-G1	B.C.	830/.680	B.S.	IIaO-E	B	Evans		
							IIaO-E				
5[illegible]/180		v 5.1	F5	B.C.	830/.680	B.S.	IIaO-E	A	Arc Prog		fine
5[illegible]/118		v 7.69	K2	B.C.	830/.680	BS	IIaO-E	B	Arc Prog	adjusted to arc	weak
3[illegible]/360		v 5.93	F6I-II	B.C.	830/.680	BS	IIaO-E	A	Arc Prog	T=74°F broken 2 places F=49%	
[illegible]/360		v 5.8	F5I-II	B.C.	830/.680	B.S.	IIaO-E	B	Arc Prog		v sl str.
5[illegible]/180	3	v 5.75	F2	B.C.	830/.680	BS	IIaO-E	A	Arc Prog	T=72°F F=49%	v sl str.
[illegible]0/ 36		3.7	G0I6	B.C	830/.680	BS	IIaO-E	B	Std Vel		fine
[illegible]0/ 36		v 2.39	K2I0	B.C.	830/.680	BS	IIaO-E	A	Std Vel		fine
[illegible]/180		v 4.99	G0Ia	B.C.	830/.680	BS	IIaO-E	B	Arc Prog	T=70°F F=49%	fine
30/ 72		v 4.4	F8Ia	B.C	830/.680	BS	IIaO-E	A	Arc Prog		good
[illegible]/ 72		v 4.85	F0Ia	BC	830/.680	BS	IIaO-E	B	Arc Prog		fine
[illegible]/180		v 5.4	F7I6	BC	830/.680	BS	IIaO-E	A	Arc Prog		v sl str.
40/ 37		v 2.5	F8I6	B.C.	830/.680	BS	IIaO-E	B	Arc Prog		fine
[illegible]/360		v 5.75	F2	BC	830/.680	BS	IIaO-E	A	Arc Prog		

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Date Aug 6-7 9 Mon Fri ... Observers Gu-Ri

Emulsion Batches:
Tmo-E 05031-03081 17 171
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
46074F	focus test							Fe/—	18-16
46074	HD186688 (SUCgs)	19 40 8	+29° 01'	20:15	21:24	0136E	+29° 11'	Fe/—	5-5-½
46074T ✓	spectral hr plate	46075		15 min @ 15 volts		① D4 3900	① D3 4300 ③	D2 4810	

Spectr. Temp. ....75°F..... Dome Temp./Hum. ..72°F....70% Transparency Conditions ..very clear/very cloudy..

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B.C.	830/.680	B.S.	IIaO	A		T: 75°F F= 495	
400/280		6.87 7.66	FO - G1	B.C.	830/.680	B.S.	IIaO-E	B	EVANS	termination - clouds	good
							IIaO-E				

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Date ~~Aug. 28 Fri. Sat.~~ 1981 Observers ....KK-RI.....

Emulsion Batches:
IIa-E 05031-06081 17 165
IIa-J 06061-19071 39 34
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
46075	HD 137909	15 23.7	+29°27	20:40	21:05	02ʰ26W	+29°12	Fe/-	11-1
46075T	spectral for plate 46075-				15min@15Volts	D4 3900	D3 4300	D2 4810	
46076	HD 172167	18 33.5	+38 41	21:07	21:12	00 35 E	+38°47	Fe/-	18-[illegible]
46077	"	"	"	21:13	21:21	00 25 E		"	18-18
46078	"	"	"	21:22	24	00 23 E			18-18
46079	"	"	"	21:56	58	00 11 W			18-18
46079T	spectral for plate 46076-				15min@D4	12.5V 3900	15V 4300	15V +810	
46080	HD 172167	18 33.5	+38 41'	22:00	22:03	00ʰ15W		Fe/-	18-18
46081	"	"		22:20	22.22	00ʰ39W		"	18-18
46081F	focus test							Fe/-	18-18
46081T1	comparison test							Fe Ne/-	10
46081T2	" "							Fe Ne/-	10

Spectr. Temp. ..... Dome Temp./Hum. 70°F 93% Transparency Conditions . scattered clouds / haze...

Focus 348

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/60	5	3.93	Fop	B.C.	1200/-.025	B.S	IIaO-E	A	Asm-Sp/KK	T=76°F F495	fine
							IIaO-E				
10/119		0.0	AOV	BC	1200/-.025	BS	IIIaJeb	B	Fenic		
20/ 71		"	"	"	"	"	"	A			sl strong
20/ 50		"	"	"	"	"	"	B		high fog	fine
20/50		"	"	"	"	"	"	A			
							IIIaJeb				
20/ 50		0.0	AOV	B.C.	1200/-.027	B S	IIIaJeb	B			
20/ 50		"	"	"	"	"	"	A			
				B.C	1200/-.025	B.S	IIaO-E	B		T: 74°F F495	
				B.C.	1200/-.025	B S	IIaO	A			
				"	"	"	"	B		pushing arm west	

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Date Aug. 9/10/81. Sunset: Mon Observers ...G.u.-.Bts..... IV-N 2nd in 10^{-1} Agfog with N_2 burst every 10s, drained on fit. Photo'ds & air-dried 18

Emulsion Batches:
.H.K..G4.1.43.-033.-03 27 73
.baked in forming gas...
6.6.'C..-.3.hrs (baked on Aug 6/81)

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
46082	HD 127929 (α Cen C)	19 47.4	+00 45	20:58	22:43	00 13 E	+00 55	Ne/	60-60-60
					@ 7½V	10 min D4 7680	30 min D3 8464		
46083	HD 228904 (WH. A)	01 32.6	+88 46	23:00	23:30	05 52 E	+89 06	Ne/-	60-60
46084	HD 228904	01 32.6	+88 46	23:38	00:01	05 19 E	+89 06	FeNe/-	10-10-10
46084T	test-spot calibr for 46084				@ 7½V	15 min D3 7080	15 min D3 7680	15 min D3 8464	
46085	HD 213307 (Cp)	22 35.5	+57 54	00:11	03.08	01 37 W	+58 15	Ne/-	60-60
46086	HD 228904	01 32.4	+88 46	03:30	03:48	01 32 E	+89 05	Ne/-	60-
46087	HD 209052 (BC)	03 17.2	+49 30	03:56	04:21	02 05 E	+49 43	Ne/-	60
46087F	focus test							Ne/-	200
87T1	comparison tests – IR							FeNe/-	30
T2								FeNe/ND0.6	30
T3								FeNe/W-66+ND1.0	30

Spectr. Temp. ....76°F..... Dome Temp./Hum. ..... 77% Transparency Conditions .... hazy 3.50

Focus ..... 495 .....

Spectr. Temp. ..... Dome Temp./Hum. ..65°F./.77%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
70 /200	3-5"	~3.7	ceph	BC	830/.9	150/.3 V filt	HIEbfg	A	IR Ceph		
							"				
/200	3-4"	~2.0	ceph	"	"	"	"	B	"		vsl wk
/200	"	"	"	"	"	"	IV-Nh	A	"		comp, str star, fine
							"				splotchy
200	.5"	~4.3	ceph	"	"	"	HIEbfg	B	IR Ceph	74°F 495	vsl wk
/200	"	~2.0	"	"	"	"	"	A	"		
/200	3-4	~3.0	FsIb	"	"	"	"	B	"		good
				"	"	150/1.0	"	A		70°F 497	good
											strong
											be-T
											fair

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Date 11/12 Aug. 7 Tues-Wed Observers ....Gu-Ri.....

But to Lunch

8" 68°

Emulsion Batches:
.HIK..G.4143.033-03 16 81
.baked in forming gas...
@ 60°C...~3 hrs.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
46088	HD 124897 (α Boo)	14 11.1	+19 42	21:41	21:49	04 40 W	+19 17	Ne/-	60-60
46089	HD 159181 (β Dra)	17 28.2	+52 23	21:55	22:30	02 05 W	-52 18	Ne/-	60-60 cc
46090	HD 125758 (ζ Boo)	14 35.6	+17 47	22:36	01:03	03 30 W	+17°58	Ne/-	60-60 60
46090A	spot calc ~ [illegible] plates		46018-73		7½ V	D4 10 min 7680	D3 30 min 8464		
46091	HD 195295 (μ Cyg)	20 35.3	+30 02	01:07	02:49	03 26 W	+30 20	Ne/-	60-60
46092	HD 8890 H	01 22.4	+58 46	02:57	03:15	01 57 E	-89 10	Ne/-	60-60
46093	HD 203109 (ρ Cyg)	21 08.7	+39 49	03:21	04:17	04 11 W	+30 09	Ne/-	60-60 60

Spectr. Temp. ...73°F..... Dome Temp./Hum. ..68°F/100% Transparency Conditions ..clear..... 352

Focus .....496.....

Spectr. Temp. .....67°F..... Dome Temp./Hum. .....63°F/93%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1/60	1-2"	1.99	K2IIIp	EC	830/.9	150/.3 V filt.	HIKbfg	A	Std Vel.	some cloud	v slow
1/200	"	2.9	G2II	"	"	"	"	B	IR Cepk		fine
1/200	"	4.3	G1II	"	"	"	"	A	IR Cepk		v slwk
							HKbfg				
1/200	"	4.0	F5II	"	"	"	"	B	IR Cepk		v slwk
1/200	"	~2.0	cepk	"	"	"	"	A	IR Cepk	68°F F=497	fair
1/200	"	3.2	G5II	"	"	"	"	B	IR Cepk		

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Date 12/13 Aug. Wed-Thurs. 1961. Observers ..G.I.S.-R.I.....

3" 65" Emulsion Batches: IIaO-E 05031-06081 22 193

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
46094F	Focus Test							Fe/—	15-15
46094	HD 186688 (5 Cyg)	19h 40.m6	+29° 01′	20:10	00:17	1h 43m W	+29° 13′	Fe/—	5-5-5
46094T	spectral tr plate	96094		15mm @ 15 Volts		① D4 3900 ②	D3 1300 ③	D2 4810	
46095	HD203064	21 14.7	+43 31	00:22	02:22	2h 15m W	+43° 50′	Fe/—	5-5-5

Spectr. Temp. ..75°F..... Dome Temp./Hum. ..70°F/75%.. Transparency Conditions ...Hazy - very.....354
Focus ...495..... thin very very hazy
Spectr. Temp. ..69°F..... Dome Temp./Hum. ..66°F/100%.. 40/27

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.520	BS	IIaO-E	A			
300/400	2-3'	6.27-7.66	FO-G1	"	"	"	"	B	Evans	BROKEN 3" PIECES	
							IIaO-E				
600/700		4.98	08I	BC	830/.68	BS	IIaO-E	A	Runaway *	T=71°F F=497	

Emulsion Batches:
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.....

Date ..... Observers .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp

'G11' 45683-4

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Typical counts / minute, unity gain, $0^m.0$ B, BS, "photometric" conditions

		seeing estimate
80 Nov 15	6.8	3"-5"
81 Jan 30	6.8	2".5 (1-8!)
Mar 18	8.3	2.5 (2-3)
Mar 23	8.3	1.5 (1-2)
Apr 6	6.8	2 (1-5)
81 May 6	5.0	2.5 (2-3)

7 ⇒ 14 min for 400/400 $5^m.0$

24 hr 10.0

1 11